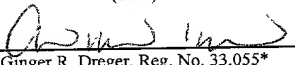


IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Applicant	:	Stanton et al.	)	Group Art Unit Unknown
)	
Appl. No.	:	Unknown	)	I hereby certify that this correspondence and all
			)	marked attachments are being deposited with
Filed	:	Herewith	)	the United States Postal Service as first-class
			)	mail in an envelope addressed to: Assistant
For	:	SECRETED FACTORS	)	Commissioner for Patents, Washington, D.C.
			)	20231, on
			)	<u>March 14, 2001</u>
			)	(Date)
Examiner	:	Unknown)	
			)	Ginger R. Dreger, Reg. No. 33,055*

SEQUENCE SUBMISSION STATEMENT

Assistant Commissioner for Patents
Washington, D.C. 20231

Dear Sir:

A copy of the Sequence Listing in computer readable form as required by 37 C.F.R. §1.821(e) is submitted herewith.


As required by 37 C.F.R. §1.82(e), the data on the enclosed disk is identical to the Sequence Listing in the application filed herewith.

Please charge any additional fees, including any fees for additional extension of time, or credit overpayment to Deposit Account No. 11-1410. A duplicate copy of this sheet is enclosed.

Respectfully submitted,

KNOBBE, MARTENS, OLSON & BEAR, LLP

Dated: March 14, 2001

By: 
Ginger R. Dreger
Registration No. 33,055
Attorney of Record
620 Newport Center Drive
Sixteenth Floor
Newport Beach, CA 92660
(415) 954-4114

12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47	48	49	50	51	52	53	54	55	56	57	58	59	60	61	62	63	64	65	66	67	68	69	70	71	72	73	74	75	76	77	78	79	80	81	82	83	84	85	86	87	88	89	90	91	92	93	94	95	96	97	98	99	100											
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cgcttataca	agcg	cac	agc	cgt	ctc	cg	cac	cgc	cac	aca	gac	aga	tga	230
	His	Ser	Arg	Leu	Arg	His	Arg	His	Thr	Asp	Arg	*		
	1				5					10				

tgc cgc ccc gac cga cgg cca gcc cca gac aca acc ttc tga aaa cac 278
Cys Arg Pro Asp Arg Arg Pro Ala Pro Asp Thr Thr Phe * Lys His
15 20 25

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aga aaa caa gtc cca gcc caa gcg gct gca tgt gtc caa cat ccc ctt      326
Arg Lys Gln Val Pro Ala Gln Ala Ala Cys Val Gln His Pro Leu
          30                      35                      40

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Pro Val Pro Gly Ser Arg Pro Pro Thr Asn Val Trp Pro Ile Trp *
45 50 55

aat att aga tgt tga aat tat ttt taa tga gcg ggg ctc gaa ggg att 422
Asn Ile Arg Cys * Asn Tyr Phe * * Ala Gly Leu Glu Gly Ile
60 65 70

tgg	ttt	cgt	aac	ttt	cga	aaa	tag	tgc	gga	tgc	gga	cag	ggc	gag	gga		470
Trp	Phe	Arg	Asn	Phe	Arg	Lys	*	Cys	Gly	Cys	Gly	Gln	Gly	Glu	Gly		
				75						80					85		

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Glu Ile Ala Arg Tyr Arg Gly Arg Gly Pro * Asn Arg Gly * *
 90 95

tgc gac agc acg cgt gat gac taa taa aaa ggc cgt gaa ccc cta cac 566
 Cys Asp Ser Thr Arg Asp Asp * * Lys Gly Arg Glu Pro Leu His
 100 105 110

caa tgg ctg gaa att aaa tcc agt tgt ggg cgc ggt cta cag ccc cga 614
 Gln Trp Leu Glu Ile Lys Ser Ser Cys Gly Arg Gly Leu Gln Pro Arg
 115 120 125

ctt cta tgc agg cac ggt gct gtt gtg cca ggc caa cca gga ggg atc 662
 Leu Leu Cys Arg His Gly Ala Val Val Pro Gly Gln Pro Gly Gly Ile
 130 135 140

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 Phe His Val Gln
 145

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 <213> Rattus norvegicus

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 Gln Ala Ala Ala Cys Val Gln His Pro Leu Pro Val Pro Gly Ser Arg
 35 40 45
 Pro Pro Thr Asn Val Trp Pro Ile Trp Asn Ile Arg Cys Asn Tyr Phe
 50 55 60
 Ala Gly Leu Glu Gly Ile Trp Phe Arg Asn Phe Arg Lys Cys Gly Cys
 65 70 75 80
 Gly Gln Gly Glu Gly Glu Ile Ala Arg Tyr Arg Gly Arg Gly Pro Asn
 85 90 95
 Arg Gly Cys Asp Ser Thr Arg Asp Asp Lys Gly Arg Glu Pro Leu His
 100 105 110
 Gln Trp Leu Glu Ile Lys Ser Ser Cys Gly Arg Gly Leu Gln Pro Arg
 115 120 125
 Leu Leu Cys Arg His Gly Ala Val Val Pro Gly Gln Pro Gly Gly Ile
 130 135 140
 Phe His Val Gln
 145

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 <212> DNA
 <213> Rattus norvegicus

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 gcctgcctcg gttaccctt cagcgtctgg tgaaatcccg cagcgtctag ggaaagatcc 180
 gttctgctcc gcgagggaaa cagagccggt gacc atg gtt gca acg ggc agt ttg 235
 Met Val Ala Thr Gly Ser Leu
 1 5
 agc agt aag aac acg gcc agc att tca gag ttg ctg gac ggt ggc tct 283
 Ser Ser Lys Asn Thr Ala Ser Ile Ser Glu Leu Leu Asp Gly Gly Ser
 10 15 20
 cac cct ggg agt ctg cta agt gat ttc gac tac tgg gat tat gtc gtc 331
 His Pro Gly Ser Leu Leu Ser Asp Phe Asp Tyr Trp Asp Tyr Val Val
 25 30 35
 cct gag ccc aac ctc aac gag gtg gtg ttt gaa gag aca aca tgc cag 379
 Pro Glu Pro Asn Leu Asn Glu Val Val Phe Glu Glu Thr Thr Cys Gln
 40 45 50 55
 aat ttg gtt aaa atg ttg gag aac tgt ctg tcc aag tca aag caa acc 427
 Asn Leu Val Lys Met Leu Glu Asn Cys Leu Ser Lys Ser Lys Gln Thr
 60 65 70
 aaa ctc ggt tgc tct aag gtc ctg gtt cct gag aaa ctg acc cag aga 475
 Lys Leu Gly Cys Ser Lys Val Leu Val Pro Glu Lys Leu Thr Gln Arg
 75 80 85
 att gcc caa gat gtc ctg cgg ctc tca tcc aca gag ccc tgc ggc ctt 523
 Ile Ala Gln Asp Val Leu Arg Leu Ser Ser Thr Glu Pro Cys Gly Leu
 90 95 100
 cgg ggc tgt gtt atg cac gtg aac ttg gaa att gaa aat gtg tgt aaa 571
 Arg Gly Cys Val Met His Val Asn Leu Glu Ile Glu Asn Val Cys Lys
 105 110 115
 aag ctg gat agg att gtg tgt gat gct agt gtg gtg ccg acc ttt gag 619
 Lys Leu Asp Arg Ile Val Cys Asp Ala Ser Val Val Pro Thr Phe Glu
 120 125 130 135
 ctc acg ctg gtg ttc aag cag gag agc tgc tcc tgg acc agc ctc aag 667
 Leu Thr Leu Val Phe Lys Gln Glu Ser Cys Ser Trp Thr Ser Leu Lys
 140 145 150

gac ttc ttc ttt agc gga ggt cgc ttc tcg tcg ggc ctt aag cga act 715
 Asp Phe Phe Phe Ser Gly Gly Arg Phe Ser Ser Gly Leu Lys Arg Thr
 155 160 165

ctg atc ctc agc tcg gga ttt cga ctt gtt aag aaa aaa ctg tac tct 763
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 170 175 180

ctg att gga acg aca gtc att gag gag tgc tga ggaggaaaaa acaattaaag 816
 Leu Ile Gly Thr Thr Val Ile Glu Glu Cys *
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 <213> Rattus norvegicus

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 35 40 45
 Phe Glu Glu Thr Thr Cys Gln Asn Leu Val Lys Met Leu Glu Asn Cys
 50 55 60
 Leu Ser Lys Ser Lys Gln Thr Lys Leu Gly Cys Ser Lys Val Leu Val
 65 70 75 80
 Pro Glu Lys Leu Thr Gln Arg Ile Ala Gln Asp Val Leu Arg Leu Ser
 85 90 95
 Ser Thr Glu Pro Cys Gly Leu Arg Gly Cys Val Met His Val Asn Leu
 100 105 110
 Glu Ile Glu Asn Val Cys Lys Lys Leu Asp Arg Ile Val Cys Asp Ala
 115 120 125
 Ser Val Val Pro Thr Phe Glu Leu Thr Leu Val Phe Lys Gln Glu Ser
 130 135 140
 Cys Ser Trp Thr Ser Leu Lys Asp Phe Phe Phe Ser Gly Gly Arg Phe
 145 150 155 160
 Ser Ser Gly Leu Lys Arg Thr Leu Ile Leu Ser Ser Gly Phe Arg Leu
 165 170 175
 Val Lys Lys Lys Leu Tyr Ser Leu Ile Gly Thr Thr Val Ile Glu Glu
 180 185 190
 Cys

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 <212> DNA
 <213> Rattus norvegicus

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Ala Val Leu Leu Ile Leu Leu Leu Ser Gly Gln Pro Gly Ser Ser Trp	
10 15 20	
gca caa gaa gct ggc gat gtg gac ctg gag cta gag cgc tac agc tac	152
Ala Gln Glu Ala Gly Asp Val Asp Leu Glu Leu Glu Arg Tyr Ser Tyr	
25 30 35	
gat gat gac ggt gat gac gat gat gac gat gat gaa gaa gag gaa gag	200
Asp Asp Asp Gly Asp Asp Asp Asp Asp Asp Asp Glu Glu Glu Glu Glu	
40 45 50	
gag gag acc aac atg atc cct ggc agc agg gac aga gca ccg cct cta	248
Glu Glu Thr Asn Met Ile Pro Gly Ser Arg Asp Arg Ala Pro Pro Leu	
55 60 65	
cag tgc tac ttc tgc caa gtg ctt cac agc ggg gag agc tgc aac gag	296
Gln Cys Tyr Phe Cys Gln Val Leu His Ser Gly Glu Ser Cys Asn Glu	
70 75 80 85	
aca cag aga tgc tcc agc agc aag ccc ttc tgt atc aca gtc atc tcc	344
Thr Gln Arg Cys Ser Ser Ser Lys Pro Phe Cys Ile Thr Val Ile Ser	
90 95 100	
cat ggc aaa act gac aca ggt gtc ctg acg acc tac tcc atg tgg tgt	392
His Gly Lys Thr Asp Thr Gly Val Leu Thr Thr Tyr Ser Met Trp Cys	
105 110 115	
act gat acc tgc cag ccc atc gtg aag aca gtg gac agc acc caa atg	440
Thr Asp Thr Cys Gln Pro Ile Val Lys Thr Val Asp Ser Thr Gln Met	
120 125 130	
acc cag acc tgt tgc cag tcc aca ctc tgc aat att cca ccc tgg cag	488
Thr Gln Thr Cys Cys Gln Ser Thr Leu Cys Asn Ile Pro Pro Trp Gln	
135 140 145	
agc ccc caa atc cac aac cct ctg ggt ggc cgg gca gac agc ccc ttg	536
Ser Pro Gln Ile His Asn Pro Leu Gly Gly Arg Ala Asp Ser Pro Leu	
150 155 160 165	
aag ggt ggg acc aga cat cct caa ggt gac agg ttt agc cac ccc cag	584
Lys Gly Gly Thr Arg His Pro Gln Gly Asp Arg Phe Ser His Pro Gln	
170 175 180	
gtt gtc aag gtt act cat cct cag agt gat ggg gct cac ttg tct aag	632
Val Val Lys Val Thr His Pro Gln Ser Asp Gly Ala His Leu Ser Lys	
185 190 195	
ggt ggc aag gct aac cag ccc cag gga aat ggg gcc gga ttc cct gca	680
Gly Gly Lys Ala Asn Gln Pro Gln Gly Asn Gly Ala Gly Phe Pro Ala	
200 205 210	

ggc tgg agc aaa ttt ggt aac gta gtt ctc ctg ctc acc ttc ctc acc 728
 Gly Trp Ser Lys Phe Gly Asn Val Val Leu Leu Leu Thr Phe Leu Thr
 215 220 225

agt ctg tgg gca tca ggg gcc taa agactcgtcc tcccccaacc aggacccttc 782
 Ser Leu Trp Ala Ser Gly Ala *
 230 235

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 aaaaaaaaaa aaaaaaaaaa aaagcggccg cc 874

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 <213> Rattus norvegicus

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 35 40 45
 Glu Glu Glu Glu Glu Glu Glu Thr Asn Met Ile Pro Gly Ser Arg Asp
 50 55 60
 Arg Ala Pro Pro Leu Gln Cys Tyr Phe Cys Gln Val Leu His Ser Gly
 65 70 75 80
 Glu Ser Cys Asn Glu Thr Gln Arg Cys Ser Ser Ser Lys Pro Phe Cys
 85 90 95
 Ile Thr Val Ile Ser His Gly Lys Thr Asp Thr Gly Val Leu Thr Thr
 100 105 110
 Tyr Ser Met Trp Cys Thr Asp Thr Cys Gln Pro Ile Val Lys Thr Val
 115 120 125
 Asp Ser Thr Gln Met Thr Gln Thr Cys Cys Gln Ser Thr Leu Cys Asn
 130 135 140
 Ile Pro Pro Trp Gln Ser Pro Gln Ile His Asn Pro Leu Gly Gly Arg
 145 150 155 160
 Ala Asp Ser Pro Leu Lys Gly Gly Thr Arg His Pro Gln Gly Asp Arg
 165 170 175
 Phe Ser His Pro Gln Val Val Lys Val Thr His Pro Gln Ser Asp Gly
 180 185 190
 Ala His Leu Ser Lys Gly Gly Lys Ala Asn Gln Pro Gln Gly Asn Gly
 195 200 205
 Ala Gly Phe Pro Ala Gly Trp Ser Lys Phe Gly Asn Val Val Leu Leu
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agaggctcac acta atg agc ggg cgc tct ctt ctt agc cac tgt tgc att 170
Met Ser Gly Arg Ser Leu Leu Ser His Cys Cys Ile
1 5 10

tgg ttt tca ttg act cct ggg cct cgt ttg agt gac act gtc ctt gtc 218
Trp Phe Ser Leu Thr Pro Gly Pro Arg Leu Ser Asp Thr Val Leu Val
15 20 25

ttt tgt ttc aga gct ctc cca gtg tta gtg gac tca gat gag gaa att 266
Phe Cys Phe Arg Ala Leu Pro Val Leu Val Asp Ser Asp Glu Glu Ile
30 35 40

atg acc aga tct gaa ata gct gaa aaa atg ttc tct tca gaa aag ata 314
Met Thr Arg Ser Glu Ile Ala Glu Lys Met Phe Ser Ser Glu Lys Ile
45 50 55 60

atg tga tcagggcccc agtgggtcca gtgtgcatgg gagcgcggtc aggtgatggg 370
Met *

aaaggcctgg ctctcgtcaa aactgacagc tgcgctatga tacatgtctc actttgttgt 430
cttggagatc tgtgtatgca ggtgaagaac tcaagtgtgg gagggctctgc cgcctcagaa 490
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ggcacactac tggcagttga aagtctgtaa tttcaaggcc aagcctggtc tacatagttc 730
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<213> Rattus norvegicus

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Glu Ile Ala Glu Lys Met Phe Ser Ser Glu Lys Ile Met
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cctggagtag ggcccagg atg cag gtg cta atg tot atc ccc ggc gct ctt 171
Met Gln Val Leu Met Ser Ile Pro Gly Ala Leu
1 5 10

ctt ccc gac tct acc atg gga tgt aac tcc agg agc ccc tgc cat ctc 219
Leu Pro Asp Ser Thr Met Gly Cys Asn Ser Arg Ser Pro Cys His Leu
15 20 25

ccg tac caa aag act gtg gct tcc gtg tot act cag aaa tca gtt cta 267
Pro Tyr Gln Lys Thr Val Ala Ser Val Ser Thr Gln Lys Ser Val Leu
30 35 40

ctt cgt aaa cag tgt tta aaa cca gac tca ttt aat cag agt gaa gga 315
Leu Arg Lys Gln Cys Leu Lys Pro Asp Ser Phe Asn Gln Ser Glu Gly
45 50 55

ttg cag tcc att ggc ttc tta gca cag aag cag ctg ata aca caa gta 363
Leu Gln Ser Ile Gly Phe Leu Ala Gln Lys Gln Leu Ile Thr Gln Val
60 65 70 75

aac ccc agc cct tga gaggtagaag caagaggatc agaggttcaa gcgcatactc 418
Asn Pro Ser Pro *

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aaaaaaaaaa agcaaagaaa gcaaaggact cgatgacatg atttatagac aaaagcagtg 538
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35 40 45
Leu Lys Pro Asp Ser Phe Asn Gln Ser Glu Gly Leu Gln Ser Ile Gly
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Phe Leu Ala Gln Lys Gln Leu Ile Thr Gln Val Asn Pro Ser Pro
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<212> DNA
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Met Ser Thr Ala Met Asn Phe Gly Thr Lys Ser Phe Gln Pro
1 5 10

cgg ccc cca gac aaa ggc agc ttc ccg cta gac cac ttc ggt gag tgt 157
Arg Pro Pro Asp Lys Gly Ser Phe Pro Leu Asp His Phe Gly Glu Cys
15 20 25 30

aaa agc ttt aag gaa aaa ttc atg aag tgt ctc cgc gac aag aac tat 205
Lys Ser Phe Lys Glu Lys Phe Met Lys Cys Leu Arg Asp Lys Asn Tyr
35 40 45

gaa aat gct ctg tgc aga aat gaa tct aaa gag tat tta atg tgc agg 253
Glu Asn Ala Leu Cys Arg Asn Glu Ser Lys Glu Tyr Leu Met Cys Arg
50 55 60

atg caa agg cag ctg atg gca cca gaa cca cta gag aaa ctc ggc ttt 301
Met Gln Arg Gln Leu Met Ala Pro Glu Pro Leu Glu Lys Leu Gly Phe
65 70 75

aga gac ata atg gag gag aaa ccg gag gca aag gac aaa tgt tga 346
Arg Asp Ile Met Glu Glu Lys Pro Glu Ala Lys Asp Lys Cys *
80 85 90

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gagagctgag ccatacctgtg ctgcccagag gaggggctct ccgtgtcgac tttggctcat 466
ccctgcagca cagaccaaac tgctttctct actgaccaca cttctgcttc agagagnngt 526
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gagtcctcac acccggaacc tgtcagcgaa aaccaanoga agcaaaatgn ctggcttttg 706
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cctgatagtc tacttcgcca acgcagcgca cagcgaggcc tgtaagaacg ggttgcggtt	180
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GenBank accession number: U00180.1 (Rattus norvegicus genome)

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Lys Gln Glu Ile Thr Gln Lys Gln Ser Ser Phe Ser Ser Val Arg Glu
 375 380 385 390
 tcc cag cag gat gga gaa aaa tgt gcc ata aaa ata ttg gaa ttc ttg 1253
 Ser Gln Gln Asp Gly Glu Lys Cys Ala Ile Lys Ile Leu Glu Phe Leu
 395 400 405
 aga aaa cgt gaa gaa cta cag cag att ttg tct agg gta aaa cag ttt 1301
 Arg Lys Arg Glu Glu Leu Gln Gln Ile Leu Ser Arg Val Lys Gln Phe
 410 415 420
 gaa gca gat tca aat aaa agt ggc ctt aaa aca ttt cag aca ctg tta 1349
 Glu Ala Asp Ser Asn Lys Ser Gly Leu Lys Thr Phe Gln Thr Leu Leu
 425 430 435
 aat att gct ccg gtg tgg ctg ata agt gag gag aaa aga gaa tat gga 1397
 Asn Ile Ala Pro Val Trp Leu Ile Ser Glu Glu Lys Arg Glu Tyr Gly
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 atgtccacag agcctttgca ctgctgaaca gtcaccctga tccaaaccaa gtaaattgga 180
 ctccaactgc accaagcagt ggccctccag tcacctctgc tgagctcttg gtgcgggcag 240
 ag atg gct tct gca gag tca ggt gaa gac cca agt cat gtg gtt ggg 287
 Met Ala Ser Ala Glu Ser Gly Glu Asp Pro Ser His Val Val Gly
 1 5 10 15
 gaa acg cct cct ttg acc ttg cca gcc aac ctc caa acc ctg cat ccg 335
 Glu Thr Pro Pro Leu Thr Leu Pro Ala Asn Leu Gln Thr Leu His Pro
 20 25 30
 aac aga cca acg ttg agt cca gag aga aaa ctt gaa tgg aat aac gac 383

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[illegible][illegible]

Species	Age	Sex	Weight (g)	Length (mm)	Wing (mm)	Tail (mm)	Culmen (mm)	Tarsus (mm)	Middle toe (mm)	Claw (mm)
1. <i>Alcedo</i>	10	♂	10.5	100	55	45	15	15	10	5
2. <i>Alcedo</i>	10	♀	10.5	100	55	45	15	15	10	5
3. <i>Alcedo</i>	10	♂	10.5	100	55	45	15	15	10	5
4. <i>Alcedo</i>	10	♀	10.5	100	55	45	15	15	10	5
5. <i>Alcedo</i>	10	♂	10.5	100	55	45	15	15	10	5
6. <i>Alcedo</i>	10	♀	10.5	100	55	45	15	15	10	5
7. <i>Alcedo</i>	10	♂	10.5	100	55	45	15	15	10	5
8. <i>Alcedo</i>	10	♀	10.5	100	55	45	15	15	10	5
9. <i>Alcedo</i>	10	♂	10.5	100	55	45	15	15	10	5
10. <i>Alcedo</i>	10	♀	10.5	100	55	45	15	15	10	5

Arg 1	Leu	Glu	Trp	Gln 5	Thr	His	Met	Val	Ala 10	His	Asp	Gly	Asp	Phe 15	Arg
Gly	Pro	Phe	Val	Cys	Ser	Glu	Leu	Val	Ile 25	Ser	Ala	Gly	Trp	Phe	Ala
			20										30		
Leu	Pro	Gly	Leu	Gly	Leu	Thr	Ser	His	Phe	Leu	Thr	Leu	Ala	Phe	Arg
		35					40					45			
Glu	Ile	Ser	His	Pro	Ser	Cys	Pro	Thr	Gly	Leu	Ser	Ile	Ala	Leu	Ile
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Ser	Ile	Leu	His	Phe	Asn	Pro	Ser	Glu	Gly	Val	Arg	Arg	Arg	Gly	Ser
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Leu	Gly	Gln	Cys	Asp	Gly	Tyr	Leu	Gln	Asn						
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Leu Val Arg Leu Trp Leu Leu Leu Leu Ser Phe Leu Leu Gly Phe Ser	-15 -10 -5
gcg gga tct gcc ctc aac tgg cgg gaa caa gaa gcc aag gaa gta tgg	149
Ala Gly Ser Ala Leu Asn Trp Arg Glu Gln Glu Gly Lys Glu Val Trp	1 5 10
gat tac gtg act gtt cga gag gat gca cgc atg ttc tgg tgg ctc tac	197
Asp Tyr Val Thr Val Arg Glu Asp Ala Arg Met Phe Trp Trp Leu Tyr	15 20 25 30
tat gcc acc aac cct tgc aag aac ttc tca gag ctg cct ctg gtc atg	245
Tyr Ala Thr Asn Pro Cys Lys Asn Phe Ser Glu Leu Pro Leu Val Met	35 40 45
tgg ctt cag ggt ggt cca ggt ggt tct agc act gga ttt gga aac ttt	293
Trp Leu Gln Gly Gly Pro Gly Gly Ser Ser Thr Gly Phe Gly Asn Phe	50 55 60
gag gaa atc gcc cct ctt gac aoc cqa ctc aaq cca cqq aac act acc	341

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caaggagacg	ccttaagtca	gctcatgaac	ggtcccatca	aaaagaagct	caaaattatc	999
cctgacgacg	tctcctgggg	agccagtcg	tcttcggtct	tcataagcat	ggaagaggac	1059
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aagctgaagt	ggccacagct	gtccagattc	aatcagctaa	aatggaaggc	cctgtacacc	1239
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tccgtgtcta	ctcagaaatc	agttctactt	cgtaaacagt	gtttaaaacc	agactcattt	1599
aatcagagtg	aaggattgca	gtccattggc	ttcttagcac	agaagcagct	gataacacaa	1659

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Pro Ala Val Met Gln Pro Pro Pro Gly Met Pro Leu Pro Ser Val Asp
35 40 45
Ile Ala Pro Pro Pro Tyr Glu Pro Pro Gly His Pro Gly Pro Lys Pro
50 55 60
Gly Xaa Met Pro Pro Thr Leu Pro His Ile Xaa Xaa Thr Xaa Xaa Cys
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Met Ser Glu Lys Glu Lys Gln Asp
1 5
tgg ctg aag gat cct ccg ttc ctt cag aga cct ggg tgg aga gca tta 162
Trp Leu Lys Asp Pro Pro Phe Leu Gln Arg Pro Gly Trp Arg Ala Leu
10 15 20
ggg aca cga aga aca gag tag cggaagaaga gttcttaagt aataagttta 213
Gly Thr Arg Arg Thr Glu *
25 30
octoctgact ggctcacatc actgccttac tctgtagaaa gcaggtoatc tcatggattt 273
ccccctccca cccccccagc tggatcattt tttgactcag ggaaaataat taaattattg 333

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catggatcca	caggagttca	aggccgcctg	gctacaaaagc	gagttcaagg	gcagccaggg	573
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	Met Leu
	1

tgt ata tca gat ctg aaa tat ctt aaa att atc act tgc att gta aat	166
Cys Ile Ser Asp Leu Lys Tyr Leu Lys Ile Ile Thr Cys Ile Val Asn	
5 10 15	

tac tat tcc ttt cgc aga aat aat gaa tgc ttc aag aaa aaa aaa agc	214
Tyr Tyr Ser Phe Arg Arg Asn Asn Glu Cys Phe Lys Lys Lys Lys Ser	
20 25 30	

tgt ttg tat tgg gtt taa aacgtttcca aacaccaatt attctttact	262
Cys Leu Tyr Trp Val *	
35	

taagtcatcc gatctagtta tttaaattatt attactgcct tcacactatc aaagatggta	322
aatatctgat agaatcatat tcaaaatact tctgtttcac atttcttgag aaagtactga	382
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tag	445

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atcccaaagc tgtatactta gattggattc aataaaaaagt ttaagtttac tnaanaaaaa	180
aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa aaaaanaaaaa aaaaaaaagg	240
aaaaaaaaaa ncggncnnaa aaaaggnnggc cgc	273

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			20					25					30		
Arg	Pro	Thr	Leu	Ser	Pro	Glu	Arg	Lys	Leu	Glu	Trp	Asn	Asn	Asp	Ile
		35					40					45			
Pro	Glu	Val	Asn	Arg	Leu	Asn	Ser	Glu	His	Trp	Arg	Lys	Thr	Glu	Glu
	50					55				60					
Gln	Pro	Gly	Arg	Gly	Glu	Val	Leu	Leu	Pro	Glu	Gly	Asp	Val	Ser	Gly
65				70						75				80	
Asn	Gly	Met	Thr	Glu	Leu	Leu	Pro	Ile	Gly	Arg	His	Gln	Gln	Lys	Arg
				85				90						95	
Pro	His	Asp	Ala	Gly	Pro	Glu	Asp	His	Ala	Phe	Glu	Asp	Gln	Leu	His
			100				105						110		
Pro	Leu	Val	His	Ser	Asp	Arg	Thr	Pro	Val	His	Arg	Val	Phe	Asp	Val
		115					120					125			
Ser	His	Leu	Glu	Gln	Pro	Val	His	Ser	Ser	His	Val	Glu	Gly	Met	Leu
	130					135					140				
Ala	Lys	Met	Glu	Gly	Met	Ala	Gln	Arg	Ser	Gly	His	Gln	Val	Ser	Lys
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<210> 26

<211> 2077

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gagggcaagg	aaggagaggg	gaagcgaaag	catatcctaa	aacatttact	taaaggagga	180
aagaaaaagg	gtcgcagaa	atg gct ggg	gca att ata	gaa aac atg	agc acc	232

Met Ala Gly Ala Ile Ile Glu Asn Met Ser Thr
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aag aag ctc tgc att gtt gga ggg att ctt ctg gtt ttc caa atc gtt 280
Lys Lys Leu Cys Ile Val Gly Gly Ile Leu Leu Val Phe Gln Ile Val
15 20 25

gcc ttt ctg gtg gga ggc ttg atc gct cca gca ccc aca acg gca gtg 328
Ala Phe Leu Val Gly Gly Leu Ile Ala Pro Ala Pro Thr Thr Ala Val
30 35 40

tcc tac gtg gca gca aaa tgt gtg gat gtc cgg aag aac cac cat aaa 376
Ser Tyr Val Ala Ala Lys Cys Val Asp Val Arg Lys Asn His His Lys
45 50 55

aca aga tgg ctg atg ccc tgg gga cca aac aag tgt aac aag atc aat 424

Thr 60	Arg	Trp	Leu	Met	Pro 65	Trp	Gly	Pro	Asn	Lys 70	Cys	Asn	Lys	Ile	Asn 75	
gac Asp	ttc Phe	gaa Glu	gaa Glu	gca Ala 80	att Ile	cca Pro	agg Arg	gaa Glu	att Ile 85	gaa Glu	gcg Ala	aat Asn	gac Asp	att Ile 90	gtg Val	472
ttt Phe	tct Ser	gta Val	cac His 95	att Ile	ccc Pro	ctc Leu	cct Pro	tct Ser 100	atg Met	gag Glu	atg Met	agc Ser 105	cca Pro	tgg Trp	ttc Phe	520
cag Gln	ttt Phe	atg Met 110	ctg Leu	ttt Phe	atc Ile	ctg Leu	cag Gln 115	ata Ile	gac Asp	att Ile	gct Ala 120	ttc Phe 125	aag Lys	cta Leu	aac Asn	568
aac Asn	caa Gln 125	atc Ile	aga Arg	gaa Glu	aat Asn	gca Ala 130	gaa Glu 135	gtt Val	tcc Ser	atg Met	gat Asp 135	gtt Val	tcc Ser	ctg Leu	ggt Gly	616
tac Tyr 140	cgt Arg	gat Asp	gat Asp	atg Met	ttt Phe 145	tct Ser	gag Glu	tgg Trp	act Thr 150	gaa Glu	atg Met	gcg Ala	cac His	gaa Glu 155	aga Arg	664
gta Val	cca Pro	cgt Arg	aaa Lys 160	ctc Leu	aga Arg	tgc Cys	act Thr	ttc Phe 165	aca Thr	tcc Ser	ccc Pro	aag Lys	acc Thr 170	cca Pro	gag Glu	712
cat His	gaa Glu	ggt Gly	cgt Arg 175	cat His	tat Tyr	gaa Glu	tgt Cys	gat Asp 180	gtc Val	ctt Leu	cct Pro	ttc Phe 185	atg Met	gaa Glu	att Ile	760
ggg Gly	tca Ser	gtg Val 190	gct Ala	cat His	aag Lys	tat Tyr	tac Tyr 195	ctt Leu	cta Leu	aat Asn	atc Ile	cgg Arg 200	cta Leu	cct Pro	gta Val	808
aat Asn	gag Glu 205	aag Lys	aag Lys	aaa Lys	atc Ile	aat Asn 210	gtt Val	gga Gly	att Ile	ggg Gly 215	gaa Glu	ata Ile	aag Lys	gac Asp	att Ile	856
cgg Arg 220	ttg Leu	gtg Val	gga Gly	atc Ile	cac His 225	caa Gln	aat Asn	gga Gly	ggt Gly	ttc Phe 230	act Thr	aag Lys	gta Val	tgg Trp	ttt Phe 235	904
gct Ala	atg Met	aag Lys	acc Thr 240	ttc Phe	ctc Leu	aca Thr	ccc Pro	agc Ser	atc Ile 245	ttc Phe	atc Ile	att Ile	atg Met	gtg Val 250	tgg Trp	952
tat Tyr	tgg Trp	aga Arg	agg Arg 255	atc Ile	acc Thr	atg Met	atg Met	tcc Ser 260	cga Arg	cct Pro	cca Pro	gtg Val	ctt Leu 265	ctg Leu	gaa Glu	1000
aaa Lys	gtc Val	atc Ile 270	ttt Phe	gcc Ala	ctt Leu	ggg Gly	att Ile 275	tcc Ser	atg Met	acc Thr	ttt Phe 280	atc Ile	aat Asn	atc Ile	cct Pro	1048
gtg Val	gaa Glu	tgg Trp	ttt Phe	tcc Ser	att Ile	gga Gly	ttt Phe	gat Asp	tgg Trp	acc Thr	tgg Trp	atg Met	ctg Leu	tta Leu	ttt Phe	1096

285	290	295	
ggt gac ata cga cag ggc atc ttc tat gca atg ctt ctt tcc ttc tgg			1144
Gly Asp Ile Arg Gln Gly Ile Phe Tyr Ala Met Leu Leu Ser Phe Trp			
300	305	310	315
atc atc ttc tgt ggc gag cac atg atg gat caa cat gag cgg aat cac			1192
Ile Ile Phe Cys Gly Glu His Met Met Asp Gln His Glu Arg Asn His			
	320	325	330
att gca ggg tat tgg aag caa gtt gga cca att gct gtt ggc tct ttc			1240
Ile Ala Gly Tyr Trp Lys Gln Val Gly Pro Ile Ala Val Gly Ser Phe			
	335	340	345
tgc ctc ttc ata ttt gac atg tgt gag aga gga gtg caa ctc aca aat			1288
Cys Leu Phe Ile Phe Asp Met Cys Glu Arg Gly Val Gln Leu Thr Asn			
	350	355	360
cct ttc tac agt atc tgg act aca gat gtt gga aca gaa ctg gct atg			1336
Pro Phe Tyr Ser Ile Trp Thr Thr Asp Val Gly Thr Glu Leu Ala Met			
	365	370	375
gct ttc atc att gtg gca ggt atc tgc ctc tgc ctc tac ttc ctg ttt			1384
Ala Phe Ile Ile Val Ala Gly Ile Cys Leu Cys Leu Tyr Phe Leu Phe			
	380	385	390
ctg tgt ttc atg gta ttt caa gta ttc aga aac atc agt ggg aaa cag			1432
Leu Cys Phe Met Val Phe Gln Val Phe Arg Asn Ile Ser Gly Lys Gln			
	400	405	410
tct agc ctc cca gcc atg agc aaa gtc cgg agg ctg cac tat gag ggt			1480
Ser Ser Leu Pro Ala Met Ser Lys Val Arg Arg Leu His Tyr Glu Gly			
	415	420	425
ctg att ttc agg ttc aag ttc ctc atg ctg atc acc ttg gct tgt gct			1528
Leu Ile Phe Arg Phe Lys Phe Leu Met Leu Ile Thr Leu Ala Cys Ala			
	430	435	440
gcc atg act gtt atc ttc ttc att gtt agt cag gtg aca gaa ggc cat			1576
Ala Met Thr Val Ile Phe Phe Ile Val Ser Gln Val Thr Glu Gly His			
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tgg aaa tgg ggt ggg gtc aca gtt caa gtg agc agt gct ttc ttc act			1624
Trp Lys Trp Gly Gly Val Thr Val Gln Val Ser Ser Ala Phe Phe Thr			
	460	465	470
gga atc tat ggg atg tgg aac ctg tat gtc ttt gct ttg atg ttc ttg			1672
Gly Ile Tyr Gly Met Trp Asn Leu Tyr Val Phe Ala Leu Met Phe Leu			
	480	485	490
tat gca cca tcc cat aag aac tat ggg gaa gac cag tct aat ggt gac			1720
Tyr Ala Pro Ser His Lys Asn Tyr Gly Glu Asp Gln Ser Asn Gly Asp			
	495	500	505
ctg ggt gtc cac agc ggg gaa gaa ctg cag ctc act acc aca atc acc			1768
Leu Gly Val His Ser Gly Glu Glu Leu Gln Leu Thr Thr Thr Ile Thr			
	510	515	520

1144
 1192
 1240
 1288
 1336
 1384
 1432
 1480
 1528
 1576
 1624
 1672
 1720
 1768

5

gcc ttg ata aga cag gaa aag cag aat tct aat aaa gat atg agg aaa 160
Ala Leu Ile Arg Gln Glu Lys Gln Asn Ser Asn Lys Asp Met Arg Lys
10 15 20

aat gac atg ggc ctt caa cct ctg cct gta ggg aag gac gca cac agt 208
Asn Asp Met Gly Leu Gln Pro Leu Pro Val Gly Lys Asp Ala His Ser
25 30 35 40

gca cca gga gtg aca gtc tct ggg aaa aac cac aaa aga act cag gca 256
Ala Pro Gly Val Thr Val Ser Gly Lys Asn His Lys Arg Thr Gln Ala
45 50 55

cct gac aag aaa cag aga att gat gtt tgt cta gaa agc cag gac ttt 304
Pro Asp Lys Lys Gln Arg Ile Asp Val Cys Leu Glu Ser Gln Asp Phe
60 65 70

cta atg aag aca aat act tcc aag gag tta aaa atg gca atg gag agg 352
Leu Met Lys Thr Asn Thr Ser Lys Glu Leu Lys Met Ala Met Glu Arg
75 80 85

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Ser Phe Asn Pro Val Asn Leu Ser Leu Thr Val Val *
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gaatttcctc	tctcctcca	ccacctataa	tgtgtgct	gaaaaaatg	agtttctcc	521
ctcatcacc	acagagaagt	caagggtga	acttgagagc	ctcccaacc	tgcctcttc	581
tccaccacca	ggagatgaga	aatctgatca	ggaatgtcta	ccaacatccc	tacctctcc	641
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<210> 31

<211> 774

<212> DNA

<213> Rattus norvegicus

 $\langle 220 \rangle$

<221> misc feature

 $\langle 222 \rangle \quad (1) \dots (774)$

<223> n = A, T, C or G

<221> CDS

<222> (297) . . . (494)

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gttgatctgt	aattattcct	agtagtctct	tagagttctt	agaagcatgc	tgttaccgct	180
aatatttcct	tttggtttgg	atcttactta	aacatattgt	ttccttactc	tctttttcat	240
cccagcttgt	ctaactgaaa	ggccagaccc	aacttgatct	atccctttaa	aacttc atg	299

Met
1

tct	tgg	cct	ggt	gat	ttc	tct	gct	cca	ggg	gtc	acc	gaa	ggg	ggt	cgc	347
Ser	Trp	Pro	Val	Asp	Phe	Ser	Ala	Pro	Gly	Val	Thr	Glu	Gly	Val	Arg	
		5						10					15			

cta	gcg	aac	ccc	ttc	gta	aca	gcc	aag	ggt	ttt	gag	aca	gag	ggt	tca	395
Leu	Ala	Asn	Pro	Phe	Val	Thr	Ala	Lys	Val	Phe	Glu	Thr	Glu	Val	Ser	
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aca	gca	ttc	ctg	gag	gag	aca	caa	agg	aca	gat	gag	tca	cat	gaa	gga	443
Thr	Ala	Phe	Leu	Glu	Glu	Thr	Gln	Arg	Thr	Asp	Glu	Ser	His	Glu	Gly	
		35						40					45			

tgg	gag	gag	gga	agg	tgg	ctg	ttg	ata	ggt	att	ttg	aga	cac	tct	att	491
Trp	Glu	Glu	Gly	Arg	Trp	Leu	Leu	Ile	Gly	Ile	Leu	Arg	His	Ser	Ile	
	50				55				60					65		

tga	gtcctacaca	acactcccc	ctccccccaa	accattttta	tgtctattga	544
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*

cctttcctct	agtcatacag	ggaaattcac	agttacctac	aaagaaccac	taattgtaac	604
aagtcaagag	gaaacttatt	tttgataatg	actcattgaa	gatgttttga	aaatttaaaa	664
ataagctctg	ttagcagaag	tctgtningaa	aagcangaag	gaantgtttg	tttattanat	724
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<210> 33
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 <212> DNA
 <213> Rattus norvegicus

<220>
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cgcttcagga	gttaatgtag
acttgactta	agcatcctga
tttaaccaag	a atg gtg gca cac aac ttt aac
	Met Val Ala His Asn Phe Asn
	1 5

ccc	cat	gct	ggg	gaa	gca	gag	gca	cac	tta	atc	tgt	gtg	agt	ccc	agg	160
Pro	His	Ala	Gly	Glu	Ala	Glu	Ala	His	Leu	Ile	Cys	Val	Ser	Pro	Arg	
		10					15					20				

cca	tcc	agg	gat	acc	gta	gta	gtg	aga	ccc	tgt	ctc	aca	aaa	caa	aga	208
Pro	Ser	Arg	Asp	Thr	Val	Val	Val	Arg	Pro	Cys	Leu	Thr	Lys	Gln	Arg	
		25				30					35					

atg	gga	att	tag	ggctgggtggg	gtcagcatg	caactgtgcc	tgttacctag	260
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GenBank accession number: U00180.1 (Rattus norvegicus genome)

Met Gly Ile *

40

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aaaaacaaca	aaaacaacaa	acccccata	aatgtatatt	taatttttaa	agactgtact	440
tgggcatggt	acttcacatc	tacagttacg	acattctaga	ggctcaggcc	tgggaattgc	500
tatgaatttg	aggccagtct	gggttagagt	gactttctcat	ctaggcagga	ctacgtaata	560
agtctttgcc	caaaaataaa	cagcaaccca	aataagagca	acaagaattc	tccctccaaa	620
tagtaacctg	ggcctggaga	gacagcttag	caactgagtg	cttgccgagc	catcgaggac	680
tggagtcctg	attccagcac	ccgtgtgaca	gacaagctgg	gcgttcactc	atgctgatga	740
acccaaggc	tgaggagaca	ctgactcttc	tctggccctg	ttcatgctgt	ccacaggtgc	800
ccaagtagca	gttaagtaga	ctgtcagaca	acatggctgg	ctttttaagc	aagaacagta	860
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agcaaccaca	tgggtggctca	caaccatctg	taatgagctc	tgatgccctc	tttttggtgt	1040
gtctgaagac	agcgacagtg	tactcatata	aaataaaata	aatctttttt	ttttttaaaa	1100
gaaatttgtc	agagatatgg	caggaagggt	atatttttac	ctattttacct	gggtgggctaa	1160
tcttggtatt	tttttcaaaa	ttaagatact	atataggagc	cgcgaagggg	tcgctaggcc	1220
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<210> 34

<211> 541

<212> PRT

<213> Rattus norvegicus

<400> 34

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Gly	Leu	Ile	Ala	Pro	Ala	Pro	Thr	Thr	Ala	Val	Ser	Tyr	Val	Ala	Ala
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Lys	Cys	Val	Asp	Val	Arg	Lys	Asn	His	His	Lys	Thr	Arg	Trp	Leu	Met
	50					55					60				
Pro	Trp	Gly	Pro	Asn	Lys	Cys	Asn	Lys	Ile	Asn	Asp	Phe	Glu	Glu	Ala
65				70					75					80	
Ile	Pro	Arg	Glu	Ile	Glu	Ala	Asn	Asp	Ile	Val	Phe	Ser	Val	His	Ile
			85					90						95	
Pro	Leu	Pro	Ser	Met	Glu	Met	Ser	Pro	Trp	Phe	Gln	Phe	Met	Leu	Phe
		100						105					110		
Ile	Leu	Gln	Ile	Asp	Ile	Ala	Phe	Lys	Leu	Asn	Asn	Gln	Ile	Arg	Glu
	115						120					125			
Asn	Ala	Glu	Val	Ser	Met	Asp	Val	Ser	Leu	Gly	Tyr	Arg	Asp	Asp	Met
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Phe	Ser	Glu	Trp	Thr	Glu	Met	Ala	His	Glu	Arg	Val	Pro	Arg	Lys	Leu
145				150					155					160	
Arg	Cys	Thr	Phe	Thr	Ser	Pro	Lys	Thr	Pro	Glu	His	Glu	Gly	Arg	His
			165					170						175	
Tyr	Glu	Cys	Asp	Val	Leu	Pro	Phe	Met	Glu	Ile	Gly	Ser	Val	Ala	His
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Lys	Tyr	Tyr	Leu	Leu	Asn	Ile	Arg	Leu	Pro	Val	Asn	Glu	Lys	Lys	Lys
	195					200					205				
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Thr	Met	Met	Ser	Arg	Pro	Pro	Val	Leu	Leu	Glu	Lys	Val	Ile	Phe	Ala	
			260					265						270		
Leu	Gly	Ile	Ser	Met	Thr	Phe	Ile	Asn	Ile	Pro	Val	Glu	Trp	Phe	Ser	
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Ile	Gly	Phe	Asp	Trp	Thr	Trp	Met	Leu	Leu	Phe	Gly	Asp	Ile	Arg	Gln	
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Gly	Ile	Phe	Tyr	Ala	Met	Leu	Leu	Ser	Phe	Trp	Ile	Ile	Phe	Cys	Gly	
305				310					315						320	
Glu	His	Met	Met	Asp	Gln	His	Glu	Arg	Asn	His	Ile	Ala	Gly	Tyr	Trp	
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Lys	Gln	Val	Gly	Pro	Ile	Ala	Val	Gly	Ser	Phe	Cys	Leu	Phe	Ile	Phe	
		340						345						350		
Asp	Met	Cys	Glu	Arg	Gly	Val	Gln	Leu	Thr	Asn	Pro	Phe	Tyr	Ser	Ile	
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Trp	Thr	Thr	Asp	Val	Gly	Thr	Glu	Leu	Ala	Met	Ala	Phe	Ile	Ile	Val	
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			405						410					415		
Met	Ser	Lys	Val	Arg	Arg	Leu	His	Tyr	Glu	Gly	Leu	Ile	Phe	Arg	Phe	
		420						425					430			
Lys	Phe	Leu	Met	Leu	Ile	Thr	Leu	Ala	Cys	Ala	Ala	Met	Thr	Val	Ile	
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465				470						475					480	
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Lys	Asn	Tyr	Gly	Glu	Asp	Gln	Ser	Asn	Gly	Asp	Leu	Gly	Val	His	Ser	
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Gly	Glu	Glu	Leu	Gln	Leu	Thr	Thr	Thr	Ile	Thr	His	Val	Asp	Gly	Pro	
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 <212> DNA
 <213> Rattus norvegicus

<220>
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atgtacaact gctacgctga tctaaacatt caaagtgcac acatttcgct atgaagccac	180
gtgaccagag tcttgaggac taatttctgt cttagtcaga ttctatttgc tatatgaaga	240
aatacc atg ata gtg tca act ttt ata aag aaa aag tat tcc ttt ggg	288
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<211> 1554

<212> DNA

<213> Rattus norvegicus

 $\langle 220 \rangle$

<221> misc feature

<222> (1) ... (1554)

<223> n = A, T, C or G

<221> CDS

<222> (141) ... (1082)

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15 20 25

agg gat agg gca gtg gcc ctc cac aaa gca ctg agg gat ctg aca gca 269
Arg Asp Arg Ala Val Ala Leu His Lys Ala Leu Arg Asp Leu Thr Ala
30 35 40

ctc ttg gcc ata gca gaa aga ggc aga tct cgg aaa ggc tgg aaa ggc 317
Leu Leu Ala Ile Ala Glu Arg Gly Arg Ser Arg Lys Gly Trp Lys Gly
45 50 55

aag gag aag ttt gtg aaa gca ttt cct tgc ttg aaa gca gac ttg gag 365
Lys Glu Lys Phe Val Lys Ala Phe Pro Cys Leu Lys Ala Asp Leu Glu
60 65 70 75

gag cac atc agc cag ctc tat gcc cta gcc gac cat gct gag gaa ctg 413
Glu His Ile Ser Gln Leu Tyr Ala Leu Ala Asp His Ala Glu Glu Leu
80 85 90

cac agg ggc tgc acc gtc tcc aac atg gtg gct gac tcc ttc agt gtt 461
His Arg Gly Cys Thr Val Ser Asn Met Val Ala Asp Ser Phe Ser Val
 95 100 105

gcc tcc gac atc ctg aac atc ttt ggt ctc ttt ctg gca cct gag tca 509
Ala Ser Asp Ile Leu Asn Ile Phe Gly Leu Phe Leu Ala Pro Glu Ser
110 115 120

gca Ala	gag Glu	gga Gly	agt Ser	ctg Leu	gtg Val	ctc Leu	tcg Ser	gca Ala	gca Ala	ggc Gly	ttg Leu	ggg Gly	ctg Leu	ggg Gly	gta Val	557
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gca Ala	gct Ala	act Thr	gtg Val	act Thr	aat Asn	gtt Val	gct Ala	act Thr	tca Ser	atc Ile	atg Met	aag Lys	gaa Glu	aca Thr	agc Ser	605
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gat Asp	ata Ile	ctg Leu	gag Glu	gaa Glu	gct Ala	ggc Gly	aca Thr	agt Ser	gtg Val	gct Ala	agg Arg	att Ile	gcc Ala	agc Ser	gag Glu	701
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gaa Glu	gat Asp	gcc Ala	agg Arg	gcc Ala	ctc Leu	atc Ile	aat Asn	gca Ala	ggt Gly	agc Ser	atc Ile	cct Pro	gcc Ala	caa Gln	cgg Arg	845
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gct Ala	aaa Lys	cag Gln	gtg Val	cgg Arg	gcc Ala	agt Ser	ctg Leu	aaa Lys	gga Gly	acc Thr	cct Pro	ctg Leu	gca Ala	atg Met	agc Ser	893
240245250																
aag Lys	gaa Glu	gac Asp	cgg Arg	atc Ile	cgc Arg	agt Ser	gcc Ala	acc Thr	acc Thr	act Thr	ggg Gly	gtc Val	acc Thr	ctc Leu	ttg Leu	941
255260265																
cgt Arg	gat Asp	gtg Val	ggg Gly	agc Ser	ctt Leu	gtg Val	aac Asn	gag Glu	tcg Ser	aag Lys	cag Gln	ttg Leu	tac Tyr	gaa Glu	ggg Gly	989
270275280																
tct Ser	gct Ala	tcc Ser	gaa Glu	tcg Ser	gca Ala	gca Ala	gca Ala	cta Leu	agg Arg	aag Lys	ctg Leu	gct Ala	cag Gln	gag Glu	ctg Leu	1037
285290295																
gag Glu	gag Glu	aag Lys	cta Leu	ggg Gly	gag Glu	ctc Leu	atg Met	aaa Lys	ttc Phe	tac Tyr	gag Glu	aca Thr	atc Ile	tga *		1082
300305310																
tcagggtttca	gccagtcacc	ccatccccaa	gacatgcaga	catcanggga	gaggatctgg											1142
acagaggttag	ggaccatgga	ggtgctgtta	gaaggagagc	aagactacag	tcagggtccga											1202
gggacatagt	gtggaggcct	gtttgatgaa	cacarcaggt	taraggatgg	agcagtggat											1262
caaagtgaga	tccactggag	cctgagacsa	gggaccagag	gatgtgctgc	aagaggggact											1322
gggaaaattg	aaatctanac	taaacatgga	aaaaaggcac	tttcgaaaga	ctagaaaacc											1382
ctccccatct	gagccattgg	aaaccccaca	aaacacaaac	cagagagaaa	agtgtgtgct											1442
ctctaaacaa	gtcgtggccc	ccagttcccc	agcccactcc	caccctcagg	ggtggcatca											1502
aataaaattgt	ttccatttca	aaaaaaaaan	naaanaaaaaa	aaaagcggcc	gc											1554

<210> 40
<211> 1142
<212> DNA
<213> Rattus norvegicus

<220>
<221> misc_feature
<222> (1)...(1142)
<223> n = A,T,C or G

<400> 40
tctagcgaac cccttcggct ttttctgatt taaagtgaag aaatggccat atttgcttga 60
taatcttcag ttgtgtctct ggaactcaac aaagaacgca ttttatgaaa tatacagctg 120
tcttcggtaa agccaacttt cttacacata tttcgggaag taattaacta caatttggac 180
ttatagttac aagggttgct tcgaaacact gctctaaatg tgtctcgtgt tggggtgcta 240
ctttgcttat gtgtaaattt cacagtaatg caatagagaa aggggtgttg tgggtgtggc 300
ttgtgggggg gattgttttg ttgttgttgt ttgagataaa gcttcattct gtagccagga 360
aagcctggaa tttactgtgt catcccaggt agcttcaaac tgggtgcctat cctgcctcag 420
cctccaacgt gttgcaattg caggagtaac ctaccacatc ctgcagctac agtgatctag 480
aacctccccg tcgaagcccc accaccatag aaaccaattt gcattaagtt ttagaattcc 540
caacccaact aaagtttaat aaaaaaagaa aaacaaaaca agattttaaat cattctttcc 600
ctcattcttt tttnagatnc agggctcncc tagttttnaa caaacacagn ngcagngnng 660
ggnnccccng gnggggnttt tttncnttgn gcncntnngc ancccacccn cccaggcngg 720
atngggnggg gtataaaaagt nttancnggc anatgnnctn ggngcanacc caagtntatc 780
aggnccn nan ttncnccca ganaactaga nancntnngc atagtanang ccccntgtgn 840
agatttnaaa ncnccctgtn cacaganana gaancctana tagaaaantc aaaatatttn 900
ggngcccaan gttncaccac ctgtagagng ggncccaaaa ancngccncc aganagcnng 960
atatntgagt tntgacctnt attctttact acnacgcntt gagagaatat tntgntgggg 1020
ccctanccac atgttttgn ccaagantgt aaanccactt naannctgng ggatatctcn 1080
ctgcanacag aagtgccng cgggatttta aaaaaaaaaa taaaaaaaaa aaaggngccn 1140
cc 1142

<210> 41
<211> 502
<212> DNA
<213> Rattus norvegicus

<220>
<221> misc_feature
<222> (1)...(502)
<223> n = A,T,C or G

<400> 41
tctagcgaac cccttcgttg agactgtgga agttatgtat gaataggaga gtgtgtgttg 60
tgtaacacag acagaaggac attggatcat gttgaacccg caccaccaac tatgagtgat 120
ggataggaaa gaatgcgaac atttaaactg cgccaatgcg gcggccatct tggtgagaa 180
gttcctagcc gagctttgat gtgatttttt tgatggtaca atgcagcgag catggccacg 240
ggagctttga atccagccga cagctccgag atttgccctt ccagtgcctt tgccaccgt 300
agagaggact gctgagatgg gattccttgt gacaagccta cttaccttta actgccagca 360
tttgtaagggt gcaatcttgt gtattggttt tttattttga cagttttgaa aacatgtttg 420
ntgntcttgg tgtttttcca gtaaaagtaa tcacaaagga aaaaaaaatt aaaaaaaaaa 480
aaaaaaaaaa aaaagcggcc gc 502

<210> 42
<211> 1426
<212> DNA
<213> Rattus norvegicus

<220>
 <221> misc_feature
 <222> (1)...(1426)
 <223> n = A,T,C or G

<400> 42
 tctagcgaac cccttcgcct tcatatgggt ttacactgta tgcattctcac cgcggcccg 60
 aacctttctt ctcatcccaa tcctgtttga ggggacgggg ggcagggacg gacaacccaa 120
 gacaagggat atttgtgctg tgggtattgc atcttatgga gggctgtagc taactgggac 180
 tcctgggtga cccaacagg cctttgatcc tctgtctctc cccgcttgat ctttcttacc 240
 ttatgcttcc ccaagtgcag ctgagggact acacagtggc tcccggccca ctccaaacac 300
 aggaaatcaa tctcagggag aggagataag aagtgaggag aagccaagat tcaaccaata 360
 gatggtaatt gctcctggga cgcggggggc aagcatcatt tccataggaa ggactgagtt 420
 tggctcctga agcccagtgg agtacctttc tctgctgaa ttctgttggt atccctggcc 480
 aagtcctctt tccagaaacc ccacctttaa aaccagctga gaaggacctt cttctctatg 540
 tttaataggt aactttccat agcttagctt ccctgcagtc tcccgagtgc ccagttaaaa 600
 ttctgccata ggtcaaaaagt ggggttgaga ggtgaagtca gaggccatgc atggagctca 660
 gaacgtttct aaacctcctg tgattcattg agtagccct agactctaga aggtcagat 720
 gccaaaaagg ktgactttat aatttcttag ggtcttctca tgggatcgkt ttcagagtgg 780
 gcattcacta aatgatagca agtttattaa ttgtttccca gygcctgac tctttatttn 840
 cccagggtt ccaaccagag cccttggttg aaagtctccc acccaccccc caccctgaga 900
 cttggtgnt ttctgagatt ccccagggat ggcaaaattg gcattcttac agggagccct 960
 gacttctagc acgttaccta gattttttac cctgctctct ctgcctattt tactatggga 1020
 tcaactgntct ctttggaact aaggaaccac cttgaagtag agtgaggtag ccacgtgttg 1080
 gtggcggaaga atataagcat tggctcttaa aagagaactt ctatgaagtc aggtgcaag 1140
 ctttaacatg gcacaagttg caccttactg gctgctaagt ctggatgtca accaaaggtc 1200
 aactctntaa ttaaagaaaa gcaagggaga agnagggtg aagnggcttn cataaacttt 1260
 attcaaaatg tctaccagga atggtggtga caccaataat cccacatgtt ggatgtngag 1320
 gcaggaagaa tgatggtaag gggcatcctc actacataat gagttgaggg tngactaggt 1380
 taactntgct tnaaaaaaaaa aaaaaaaaaa aaaaaaaagg ggngcc 1426

<210> 43
 <211> 985
 <212> DNA
 <213> Rattus norvegicus

<220>
 <221> CDS
 <222> (79)...(255)

<400> 43
 tctagcgaac cccttcgcaa gaactcagac tgctcctgcc tgacttcccta ggtgtcatag 60
 ctctcttctg ccgccagt atg aca tca tca agg aca acg agc cca ata aca 111
 Met Thr Ser Ser Arg Thr Thr Ser Pro Ile Thr
 1 5 10
 aca agg aaa aaa cca aga gtg cat cag aga cca gca ccc cag agc acc 159
 Thr Arg Lys Lys Pro Arg Val His Gln Arg Pro Ala Pro Gln Ser Thr
 15 20 25
 agg gtg ggg gtc tcc tcc gaa gca aga tat gaa acc ctt tca gtg ctt 207
 Arg Val Gly Val Ser Ser Glu Ala Arg Tyr Glu Thr Leu Ser Val Leu
 30 35 40
 gct ctg agc agc tca gaa gta gaa tgc gag agg acc tca ctg ttc tga 255
 Ala Leu Ser Ser Ser Glu Val Glu Cys Glu Arg Thr Ser Leu Phe *

55

[illegible]

tcc tac gct ctc tgc acg cgg cgc acc gcc cgc acc tgc cgc ggg gac 526
 Ser Tyr Ala Leu Cys Thr Arg Arg Thr Ala Arg Thr Cys Arg Gly Asp
 50 55 60

ctc	gct	ttc	cac	tcc	gcg	gtg	cat	ggc	ata	gag	gac	ctg	atg	atc	cag	574
Leu	Ala	Phe	His	Ser	Ala	Val	His	Gly	Ile	Glu	Asp	Leu	Met	Ile	Gln	
			65					70					75			
cac	aac	tgc	tca	cgc	cag	ggt	ccc	acg	gcc	tcg	ccc	ccg	gcc	cgg	ggt	622
His	Asn	Cys	Ser	Arg	Gln	Gly	Pro	Thr	Ala	Ser	Pro	Pro	Ala	Arg	Gly	
			80					85					90			
cct	gcc	ctg	ccc	ggg	gcc	ggc	cca	gcg	ccc	ctg	acc	cca	gat	ccc	tgt	670
Pro	Ala	Leu	Pro	Gly	Ala	Gly	Pro	Ala	Pro	Leu	Thr	Pro	Asp	Pro	Cys	
			95					100					105			
gac	tat	gaa	gcc	cgg	ttt	tcc	agg	ctg	cac	ggt	cga	acc	ccg	ggt	ttc	718
Asp	Tyr	Glu	Ala	Arg	Phe	Ser	Arg	Leu	His	Gly	Arg	Thr	Pro	Gly	Phe	
110						115					120					125
ttg	cat	tgt	gct	tcc	ttt	gga	gac	ccc	cat	gtg	cgc	agc	ttc	cac	aat	766
Leu	His	Cys	Ala	Ser	Phe	Gly	Asp	Pro	His	Val	Arg	Ser	Phe	His	Asn	
			130								135					140
cac	ttt	cac	aca	tgc	cgc	gtc	caa	gga	gct	tgg	ccc	cta	cta	gat	aac	814
His	Phe	His	Thr	Cys	Arg	Val	Gln	Gly	Ala	Trp	Pro	Leu	Leu	Asp	Asn	
			145					150					155			
gac	ttc	ctc	ttt	gtc	caa	gcc	acc	agc	tcc	ccg	gta	gca	tcg	gga	gcc	862
Asp	Phe	Leu	Phe	Val	Gln	Ala	Thr	Ser	Ser	Pro	Val	Ala	Ser	Gly	Ala	
			160					165					170			
aac	gct	acc	acc	atc	cgg	aag	atc	act	atc	ata	ttt	aaa	aac	atg	cag	910
Asn	Ala	Thr	Thr	Ile	Arg	Lys	Ile	Thr	Ile	Ile	Phe	Lys	Asn	Met	Gln	
			175					180					185			
gaa	tgc	att	gac	cag	aaa	gtc	tac	cag	gct	gag	gta	gac	aat	ctt	cct	958
Glu	Cys	Ile	Asp	Gln	Lys	Val	Tyr	Gln	Ala	Glu	Val	Asp	Asn	Leu	Pro	
190						195					200					205
gca	gcc	ttt	gaa	gat	ggt	tct	gtc	aat	ggg	ggc	gac	cga	cct	ggg	ggc	1006
Ala	Ala	Phe	Glu	Asp	Gly	Ser	Val	Asn	Gly	Gly	Asp	Arg	Pro	Gly	Gly	
			210					215					220			
tcg	agt	ttg	tcc	att	caa	act	gct	aac	ctt	ggg	agc	cac	gtg	gag	att	1054
Ser	Ser	Leu	Ser	Ile	Gln	Thr	Ala	Asn	Leu	Gly	Ser	His	Val	Glu	Ile	
			225					230					235			
cga	gct	gcc	tac	att	gga	aca	act	ata	atc	gtt	cgt	cag	aca	gct	gga	1102
Arg	Ala	Ala	Tyr	Ile	Gly	Thr	Thr	Ile	Ile	Val	Arg	Gln	Thr	Ala	Gly	
			240					245					250			
cag	ctc	tcc	ttc	tcc	atc	agg	gta	gcg	gag	gat	gtg	gca	cgg	gcc	ttc	1150
Gln	Leu	Ser	Phe	Ser	Ile	Arg	Val	Ala	Glu	Asp	Val	Ala	Arg	Ala	Phe	
			255					260					265			
tct	gct	gag	cag	gat	cta	cag	ctg	tgt	gtt	ggg	gga	tgc	cct	ccg	agc	1198
Ser	Ala	Glu	Gln	Asp	Leu	Gln	Leu	Cys	Val	Gly	Gly	Cys	Pro	Pro	Ser	
270						275					280					285
cag	cga	ctc	tct	cgc	tca	gag	cgc	aat	cgc	cgt	ggg	gc				

Gln Arg Leu Ser Arg Ser Glu Arg Asn Arg Arg Gly Ala Ile Ala Ile
290 295 300

gat act gcc aga agg ttg tgt aag gaa ggg ctt ccg gtt gaa gat gcc 1294
Asp Thr Ala Arg Arg Leu Cys Lys Glu Gly Leu Pro Val Glu Asp Ala
305 310 315

tac ttc caa tcc tgc gtc ttt gat gtt tca gtc tcc ggt gac ccc aac 1342
Tyr Phe Gln Ser Cys Val Phe Asp Val Ser Val Ser Gly Asp Pro Asn
320 325 330

ttt act gtg gca gct cag tca gct ctg gac gat gcc cga gtc ttc ttg 1390
Phe Thr Val Ala Ala Gln Ser Ala Leu Asp Asp Ala Arg Val Phe Leu
335 340 345

acc gat ttg gag aac ttg cac ctt ttc cca gta gat gcg ggg cct ccc 1438
Thr Asp Leu Glu Asn Leu His Leu Phe Pro Val Asp Ala Gly Pro Pro
350 355 360 365

ctc tct cca gcc acc tgc cta gtc cgg ctt ctt tgc gtc ctc ttt gtt 1486
Leu Ser Pro Ala Thr Cys Leu Val Arg Leu Leu Ser Val Leu Phe Val
370 375 380

ctg tgg ttt tgc att cag taa gtaggccagc aacccgtgac tagtttggaa 1537
Leu Trp Phe Cys Ile Gln *
385

acggtttgag gagagaggtt gatgtgagaa aacacaaaga tgtgccaaag gaaacagtgg 1597
ggacaggaga caacgacctt actcaatcac acgaggttgc agtccagggc tgaaatgacc 1657
ctagaataaaa gattctgaga caggggtttt cactccagac cttggtatgg gctccccatg 1717
aatttcccca ttagtgattt cccacttgta gtgaaattct actctctgta cacctgatat 1777
cactcctgca aggctagaga ttgtgagagc gctaagggcc agcaaaacat taaagggtg 1837
agatatctta aaggcagaaa ctagaaaagg ggaaccatg attatctata agaaaatcaa 1897
aagagggggtt tgggaattta gctcagtgg agagcacttg cctagcaagc gcaaggccct 1957
gggttcggtc cccagctcct aaaaaaaaaa aaaaaaaaaa aaaaagcggc cgc 2010

<210> 45
<211> 705
<212> DNA
<213> Rattus norvegicus

<220>
<221> misc_feature
<222> (1)...(705)
<223> n = A,T,C or G

<221> CDS
<222> (54)...(230)

<400> 45
tctagcgaac cccttcgtgg ggattaaggt tctctatagc taagcctgtc nga atg 56
Met
1

aca aca ccc aga gat ctc acc tgg ggt ggt ggg agc act ctc tgt ctt 104
Thr Thr Pro Arg Asp Leu Thr Trp Gly Gly Gly Ser Thr Leu Cys Leu
5 10 15

gag gga aca tgt acc tac tct ctc ctt cca caa gag cca cat aca ctt 152
 Glu Gly Thr Cys Thr Tyr Ser Leu Leu Pro Gln Glu Pro His Thr Leu
 20 25 30

aga agt tcc agt gaa gat cta tgt gct tca gaa gag agg gga ctt gga 200
 Arg Ser Ser Ser Glu Asp Leu Cys Ala Ser Glu Glu Arg Gly Leu Gly
 35 40 45

ggt gaa agg ggg agt ggg agg ggg gct tga ggacctanct gaaagatttt 250
 Gly Glu Arg Gly Ser Gly Arg Gly Ala *
 50 55

angctgaaag aacttccttg attcaaagac atatgtcagt ngacccaaca atgagaatga 310
 atatgagggc caggaaaact tgtgggaatc agtctcaaga cngaaacnga gaaagaaaga 370
 aaagtggnta ggactcanat tggggaacct gggtagacag gagtggcnag ggaagaaagg 430
 gatcttgggt tntccacagt ttgagacaca tccggngntc gacctattc ccngaagccn 490
 kannanattg tgcttcccn tcnntnnaat gggcctggng gtctnctcc ctttncctng 550
 gacatgaaaa ngtnntctgc nnanataacc cccntcttcc ctcccccttn antntgtccc 610
 tacntttttg tccctttttt ttttnaaaaa annaaaataa aggggnncnn tnttccttn 670
 gaaaaaaaaa aaaaaaaaaa aaaaaaccgc ccncc 705

<210> 46
 <211> 968
 <212> DNA
 <213> Rattus norvegicus

<220>
 <221> misc_feature
 <222> (1)...(968)
 <223> n = A,T,C or G

<221> CDS
 <222> (86)...(244)

<400> 46
 tctagcgaac cccttcgcga aggggttcgc ttacattcac gcttaagcat attaaactgta 60
 catattaact gatttagagg atact atg gat tcc aca tct tcc ctg agc ata 112
 Met Asp Ser Thr Ser Ser Leu Ser Ile
 1 5

ggg att gat ttg aaa aat gac agg gtt ggc tgt cga ccc cca tcg gag 160
 Gly Ile Asp Leu Lys Asn Asp Arg Val Gly Cys Arg Pro Pro Ser Glu
 10 15 20 25

gaa gca ggt aag gaa tca ctt agg aga act gat ctc aac att ctt cag 208
 Glu Ala Gly Lys Glu Ser Leu Arg Arg Thr Asp Leu Asn Ile Leu Gln
 30 35 40

ttc ttt cta tta ttt act tgt tta gcc tgg agt taa attcccactc 254
 Phe Phe Leu Leu Phe Thr Cys Leu Ala Trp Ser *
 45 50

cttgtgagca cttctaattt gaaaatccac tttcttcaat attttcgaaa tttaaaactg 314
 atggatgacg tgacaaaact tccacgagtt aagaattctc cacctctgat ctcatcgcag 374
 cagggcacaa tccaaggcat gtgaattgac ttccaggttt atgtgacata taaatgaatt 434
 ctgtctctag atttgatcc cattctccta aatatctcac catgcatgtg cagatattct 494

gag gga aca tgt acc tac tct ctc ctt cca caa gag cca cat aca ctt
 Glu Gly Thr Cys Thr Tyr Ser Leu Leu Pro Gln Glu Pro His Thr Leu
 aga agt tcc agt gaa gat cta tgt gct tca gaa gag agg gga ctt gga
 Arg Ser Ser Ser Glu Asp Leu Cys Ala Ser Glu Glu Arg Gly Leu Gly
 ggt gaa agg ggg agt ggg agg ggg gct tga ggacctanct gaaagatttt
 Gly Glu Arg Gly Ser Gly Arg Gly Ala *
 angctgaaag aacttccttg attcaaagac atatgtcagt ngacccaaca atgagaatga
 atatgagggc caggaaaact tgtgggaatc agtctcaaga cngaaacnga gaaagaaaga
 aaagtggnta ggactcanat tggggaacct gggtagacag gagtggcnag ggaagaaagg
 gatcttgggt tntccacagt ttgagacaca tccggngntc gacctattc ccngaagccn
 kannanattg tgcttcccn tcnntnnaat gggcctggng gtctnctcc ctttncctng
 gacatgaaaa ngtnntctgc nnanataacc cccntcttcc ctcccccttn antntgtccc
 tacntttttg tccctttttt ttttnaaaaa annaaaataa aggggnncnn tnttccttn
 gaaaaaaaaa aaaaaaaaaa aaaaaaccgc ccncc
 <210> 46
 <211> 968
 <212> DNA
 <213> Rattus norvegicus
 <220>
 <221> misc_feature
 <222> (1)...(968)
 <223> n = A,T,C or G
 <221> CDS
 <222> (86)...(244)
 <400> 46
 tctagcgaac cccttcgcga aggggttcgc ttacattcac gcttaagcat attaaactgta
 catattaact gatttagagg atact atg gat tcc aca tct tcc ctg agc ata
 Met Asp Ser Thr Ser Ser Leu Ser Ile
 1 5
 ggg att gat ttg aaa aat gac agg gtt ggc tgt cga ccc cca tcg gag
 Gly Ile Asp Leu Lys Asn Asp Arg Val Gly Cys Arg Pro Pro Ser Glu
 10 15 20 25
 gaa gca ggt aag gaa tca ctt agg aga act gat ctc aac att ctt cag
 Glu Ala Gly Lys Glu Ser Leu Arg Arg Thr Asp Leu Asn Ile Leu Gln
 30 35 40
 ttc ttt cta tta ttt act tgt tta gcc tgg agt taa attcccactc
 Phe Phe Leu Leu Phe Thr Cys Leu Ala Trp Ser *
 45 50
 cttgtgagca cttctaattt gaaaatccac tttcttcaat attttcgaaa tttaaaactg
 atggatgacg tgacaaaact tccacgagtt aagaattctc cacctctgat ctcatcgcag
 cagggcacaa tccaaggcat gtgaattgac ttccaggttt atgtgacata taaatgaatt
 ctgtctctag atttgatcc cattctccta aatatctcac catgcatgtg cagatattct

115	120	125	
aac aaa agc caa caa ctc act gac ttc ata gaa aaa ttc aag tgt gat			674
Asn Lys Ser Gln Gln Leu Thr Asp Phe Ile Glu Lys Phe Lys Cys Asp			
130	135	140	
gga tct cct gtg aat tct gag ctc atc cag gga gct cag agc agt tgt			722
Gly Ser Pro Val Asn Ser Glu Leu Ile Gln Gly Ala Gln Ser Ser Cys			
145	150	155	
ctg aag atc gac agc ctc ctt gaa ctt ctg caa gac agg aga agg cag			770
Leu Lys Ile Asp Ser Leu Leu Glu Leu Leu Gln Asp Arg Arg Arg Gln			
160	165	170	175
ctg gac aag cac ttg cag caa cag agg cag gag ttg tct cag gtt ctg			818
Leu Asp Lys His Leu Gln Gln Gln Arg Gln Glu Leu Ser Gln Val Leu			
180	185	190	
cag tta tgt ctg tgg gac caa caa gaa agc cag gtt tct tgt tgg ttt			866
Gln Leu Cys Leu Trp Asp Gln Gln Glu Ser Gln Val Ser Cys Trp Phe			
195	200	205	
cag aaa aca ata aga gat ctg cag gaa cag agt ctg ggt tca tcc ctt			914
Gln Lys Thr Ile Arg Asp Leu Gln Glu Gln Ser Leu Gly Ser Ser Leu			
210	215	220	
tca gac aac aaa gag tta atc cgt aag cac gag gac ctg cca tca aag			962
Ser Asp Asn Lys Glu Leu Ile Arg Lys His Glu Asp Leu Pro Ser Lys			
225	230	235	
caa aga gtc cct gca gtt tag gaattgaaca gaacagtttc ctgattgaat			1013
Gln Arg Val Pro Ala Val *			
240	245		
gatcttggcg cctyyttanc ggntgcagat ggtggggcct cctctggntt ctcatectct			1073
tcactaatac tggatttttg ttcccctggt gtgccacatc actttaattt gaaagaaaaa			1133
aaataaattg ggccggaaaa aaaaaaaaaa aaaaaaaaaa rrscggccnc			1183

<210> 48

<211> 1051

<212> DNA

<213> Rattus norvegicus

<400> 48

tctagcgaac cccttcgcgc aagatggccg cttcccagac cgctccgcgg catcttcaag	60
atgcgcgaga agaacgtgca atctcgcgag atcaggctcg ctgcgcggca gtctgctgc	120
agcctaccct tcctaggagt tggaggaggg aaagctagat tcgattaaga gcaaaaaatt	180
gttcacgcag cagagcagct gtccaaggaa gtatccaaag gaactgcacc tcagtaaaact	240
cctggcaagt cttaggatat gacaaagggc acaggatgca ttatgagaaa ggaaggctaa	300
ggttttcaag aacacagatt tacatcaaac ttgcgttctg aattaatctt tgagaataact	360
ggactgtgag ctagacattg agtaagaggt ttgttatatc aagaatgtga tctaaaaaaa	420
aaacattcat atcttcctcc cacaagagga tattttgaaa ctgtgggtca aagtcagact	480
acaggagagc cctcaaatat gccaaatgtg acagacagca ggattttgaa aatatagtgg	540
gagtatgtga agatgttcca gtcaaagaga cattgtttcc aaaggaaaga aagtcagtc	600
gocacacagg aattgtgtat tccctggtag taatgcaaat ggaccacata tggctttctt	660
ctttaaagag aatacctaatt tttagctaca gagtaaaatg ctgatgatac aaaccgtgac	720
aagtggaggg acaagaaagt aaatggactg atggtgccat tgtggactgg gagggtaaaa	780

gctgtacatt	tgtgaacaaa	aagatttcct	tgttatgggc	agccatgatt	ctaactgcta	840
aatggaggca	gtaacaacat	gacctaaaga	gtaaacaatcc	agagatggaa	tgttctcaat	900
gtctgaaaag	gagcagatat	ctgggtgatg	tgaatgtatg	ctagagattt	tttacaagcc	960
tgtgggtgaat	tagtaattgt	atTTTTttt	gaaagttaaa	caggtaatta	gaaaccccaa	1020
aaaaaaaaaa	aataaaaaaaaa	aagcggccgc	c			1051

<210> 49
 <211> 576
 <212> DNA
 <213> Rattus norvegicus

<220>
 <221> misc_feature
 <222> (1)...(576)
 <223> n = A,T,C or G

<400> 49	
tctagcgaac	cccttcgctg aaaccaccgt tcacacggga aacctggggt aggcttttgt 60
cctcagtgac	acagaggatg tagtccacag ctaggtagaa atgtcagggt cccaacacta 120
ctccagctgt	gactttgatg cttgggggat ggggtcgcag gctattttct ctgctttaac 180
agttcataga	atttaacaga taagagttag tgtctttcat gtggcctcac tctggagtta 240
tgagaacata	cacacggttt acagcttttc aatatncctt tccctggcca tcaagtattt 300
tgaaagtgtg	ccacctttta acctttgcgc tttatttttt tttctttttt taaagntgaa 360
ggtgataatt	cttctatata tgatgaaact caatgtctac tgaaataagt gtaaccttag 420
ctatncacgt	ttatntttta aaaccacgct atggagatat taccctcgagt tctgtcnttt 480
ngcaagattt	acagnacott ccncccccc cttttagcat tnaataaaaa natattgggg 540
agcncnntna	aaaaaaaaaa aatnaanaaa agcggc 576

<210> 50
 <211> 587
 <212> DNA
 <213> Rattus norvegicus

<220>
 <221> misc_feature
 <222> (1)...(587)
 <223> n = A,T,C or G

<221> CDS
 <222> (161)...(586)

<400> 50	
tctagcgaac	cccttcgctg gatctgatcc gagctgagac ttggggagct ctggctccgt 60
ggtggctgca	gcatccccc tggtcttgtc tgagggtgcc tgtgactcga ctcttcagaa 120
ctcaatgaag	tagatgactt gactacaatg tggaacatc atg aca gaa agt gtg 175
	Met Thr Glu Ser Val
	1 5
ggt tgt acc ggg gcc gtc agc act gta aag gaa gtc tgg gaa gaa aga 223	
Val Cys Thr Gly Ala Val Ser Thr Val Lys Glu Val Trp Glu Glu Arg	
	10 15 20
ata aag aaa cat cat gaa gat gtg aaa cga gag aag gaa ttt cag caa 271	
Ile Lys Lys His His Glu Asp Val Lys Arg Glu Lys Glu Phe Gln Gln	
	25 30 35
aag cta gtg cgg atc tgg gaa gac cga gtg agt tta act aag ctg aaa 319	

1000
 900
 800
 700
 600
 500
 400
 300
 200
 100
 0

Lys Leu Val Arg Ile Trp Glu Asp Arg Val Ser Leu Thr Lys Leu Lys
 40 45 50

gag aag gtg acc agg gaa gat gga aga atc att cta agg ata gag aaa 367
 Glu Lys Val Thr Arg Glu Asp Gly Arg Ile Ile Leu Arg Ile Glu Lys
 55 60 65

gag gaa tgg aag act ctc cct tct tcc tta ctg aaa ctg aat cag cta 415
 Glu Glu Trp Lys Thr Leu Pro Ser Ser Leu Leu Lys Leu Asn Gln Leu
 70 75 80 85

cag gag tgg caa ctt cat agg acc gga ttg ttg aaa att cct gaa ttc 463
 Gln Glu Trp Gln Leu His Arg Thr Gly Leu Leu Lys Ile Pro Glu Phe
 90 95 100

att gga aga ttc cag cat ctc att ggt cta gac tta tct cgg aac aca 511
 Ile Gly Arg Phe Gln His Leu Ile Gly Leu Asp Leu Ser Arg Asn Thr
 105 110 115

att tca gag atc ccc ccg agg cat tgg act gnt cac tta gac ttc aag 559
 Ile Ser Glu Ile Pro Pro Arg His Trp Thr Xaa His Leu Asp Phe Lys
 120 125 130

gaa ctg att ctt agc tac aca aaa tca a 587
 Glu Leu Ile Leu Ser Tyr Thr Lys Ser
 135 140

<210> 51
 <211> 819
 <212> DNA
 <213> Rattus norvegicus

<220>
 <221> misc_feature
 <222> (1)...(819)
 <223> n = A,T,C or G

<400> 51
 totagcgaac cccttcgggtt ctgtttggcta cacagctgca gagccatggc tgaccgttca 60
 ctgtcagggg cacatgttac actaagcttc atgacagtga tgtaataatg ttacacattt 120
 gtctttagt tatgtattga agtttctgtc ctgttttggtg taaaaatgta tccactcttg 180
 tatatattta gacttgaaac taccacacaa atattggaac ggtttgcttt atgaagttaa 240
 aagtatcctt ccgaatggaa ctaacttgct ttgtgctcag acatatacta tgctgatgta 300
 ttttgcaata tactatctta aattaaatct ggtcactttg ttgccttttt aaaaagtgtg 360
 gtattttcaag tagagttatt ttctgaaat atatttgcaa actcaagctg ctttataatc 420
 aaggaatatt tttattgatt gaagaaaatg actgctgcaa ttcaaaagtg aacttatttt 480
 attatataga tgatttctta aaagctattt ataccatgat acaaaatcat gtagtgatcc 540
 tgggagtgctg tagttcttcc tgttaataac attcaacact gtatgctaga ggcagcaatg 600
 ccaacactga agttattttg ggtgaaaacc gtcgtttotgn cctgttttagc tggggattat 660
 taaatccata taatgtatgt gcttatgtat gctacatgtg caagttagggt gtttctcttg 720
 tgttctgctt attaaatgtc attcagattc acttcttgaa ttctaataaa gaggggaagct 780
 attggaaaaa ataaaaaaaa aaaaaaaaaa gcggccgcc 819

<210> 52
 <211> 1648
 <212> DNA

<213> Rattus norvegicus

<220>

<221> misc_feature

<222> (1)...(1648)

<223> n = A,T,C or G

<400> 52

tctagcgaac	cccttcggtg	gcgcacgccg	gtaggatttg	ccacgcaa	gctggaatta	60
aagacatgca	gcagcagcgc	cctgtgggtt	tgggttttta	tttgattgct	tatttttata	120
taatttttaa	tttttttgtg	atgaacgttt	tatctgcatt	tatgtctctg	taccacattc	180
gtgcctgggtg	ctatggaggc	caaaaaagga	ttttaggccc	gagattgtag	ttatagatgg	240
ttgtgggctg	ccaatctgag	tgtgaaaaat	taaacctggg	tactctgaaa	gaccagccag	300
tgtctttaac	tatcaggcca	cctctccagc	actattttat	tttattttat	ttgtggagat	360
agggctctctc	tctctgtatc	ctagtctaac	ttaaaacata	aagaatattc	tgtatcagta	420
tccttgagta	ctaggattct	aggcacctgt	cattatgcct	agatttttaa	cagtgtgtgt	480
taattctaca	taaaaatgaa	tttcattatt	acattttcac	acttgtgaag	aatatacttt	540
gatcatattc	ccttctcctg	atactttttc	ctatccttcc	tccccactcc	attagttccc	600
ttcttctttt	cagagtctac	cttctacttt	ttactttgat	ttttttcccc	ccacattctg	660
tgggtgagag	aatgcataatt	acagttgtat	ttctgaatct	ggctaggtac	attcacttaa	720
cataattaat	gatcctgggc	gagcgaagg	gttcncctan	cnaaccctt	cggttcaata	780
ccatttcaga	gatgggcatt	tccttcaatg	aaatacacaa	gtaaacattc	cgacattgtc	840
tttaggagtg	tttgttaaaa	aaaaaaaaaa	aaaaaacan	ancccaaaa	caaaaaaaaa	900
aaagctttgc	accttgcaaa	agtggctcctg	gcgtgggtag	attgctgtta	atcctttatc	960
aataacgttc	tatagagaat	atataaatat	atatataatt	atatctccta	gtccctgcct	1020
cttaagagcc	gaaaatgcat	gggtgttgta	gacattcggg	tgcactaaat	tcctctctga	1080
attttggtcg	ctgaagccgt	tcatttagca	actgtttata	ggtggttgat	gaatggttcc	1140
ttatctocat	ttcttcctat	gtagcttaag	ccgcttcctt	cacagaatct	aataatctcg	1200
tctaggocat	tagccctgcc	ctttcttaac	attcttgtat	ttgttgaatt	tggcctctct	1260
gaaagcaata	gcaactgggt	ggcccaccca	agttttaacg	cccctgattc	catctatggc	1320
atttgtacca	aatataagtt	ggatgcattt	attttagaca	caaagcttta	ttttttogac	1380
atcgtgtttc	aagaaaaaaaa	acaaatagaa	taacaataac	tatgactttg	aggccaatca	1440
tttttaggtg	tgtgtttgaa	gcatagaacg	tctnttaaac	totcaatggg	tccttcaaat	1500
gatgagttag	tatgtaacgt	aaatagcagt	ttctctctct	ctctctctct	ttttattttt	1560
tocanataga	gcactatgta	aatttagcat	atcaataata	caggaaactat	ccnccaaaaa	1620
aaaaaaaaaa	aaaaaaaaaa	gcggccgc				1648

<210> 53

<211> 782

<212> DNA

<213> Rattus norvegicus

<220>

<221> misc_feature

<222> (1)...(782)

<223> n = A,T,C or G

<221> CDS

<222> (277)...(426)

<400> 53

tctagcgaac	cccttcgtag	aactaggagc	cagtgttgac	caaggctcgg	ggttgatac	60
cccactgcat	gctgcagcaa	ggcagtcag	tgtggaggtc	atcaatctgc	tcactgagta	120
tggggctaac	ctgaaactca	gaaactcgca	gggcaaaagt	gctcttgagc	tcgtgtctcc	180
caaaagtagt	gtggagcagg	cactcctgct	ccatgaaggt	ccacctgctc	tttctcagct	240
ctgccgcttg	tgtgtccgga	agtgcctggg	ccgcac atg	tca tca agc cat cta		294
			Met	Ser Ser Ser His Leu		

5

gtt gga aac atg ttg cct gct gta gga cac tta ata tac aca ttc agt 390
Val Gly Asn Met Leu Pro Ala Val Gly His Leu Ile Tyr Thr Phe Ser
25 30 35

ggc tta acc cac tat cct aaa aat ctg ctt acc taa ttagaataaaa 436
Gly Leu Thr His Tyr Pro Lys Asn Leu Leu Thr *
40 45

gccttcataa	atccaaatac	ttgcggttaa	caaactcctg	gttagggttaa	tggntgccaa	496
gagataacca	gaaacctttc	aagtttttaa	ctcttggtaa	tttaaaatca	aactgaaata	556
gatggaaaat	aataatctat	ttttggataa	ttcaaggacc	cttcagtatc	tggggctggg	616
gtccgcattt	tgatactgg	atagacacac	acacaggtag	gatanggtaa	atnaactact	676
taaaagaatg	cctgggattt	aagtctcca	gatatttttt	aggtngnggt	ttcctaaaat	736
aaaattctgg	agtgccaaaa	aaaaaaaaaa	aaaaaaaaag	cgggcc		782

```
<210> 54
<211> 538
<212> DNA
<213> Rattus norvegicus
```

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<220>
<221> misc_feature
<222> (1)...(538)
<223> n = A,T,C or G
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<221> CDS
<222> (252) ... (464)

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<400> 54
gtctagcgaa ccccttcggg aaacttoaac aaaggtacca gcaactacag cgccttgtcc      60
accagattt cttagccaa aagtctcaga ctgagaaacg gttctcggag aagcattcga      120
ccctggtgaa tgatgcctac aagactcttc agggccccgt gagcagagga ctatatcttc      180
taaagctcca aggaatagaa attcctgaag ggacagatta tagaacagac agtcagttcc      240
ttgtggaaat c atg gaa atc aat gaa aaa ctc gca gac gcc aaa agt gag      290
          Met Glu Ile Asn Glu Lys Leu Ala Asp Ala Lys Ser Glu
                1                5                10

```

gca gcc atg gaa gag gta gaa gcc act gtc aga gct aaa cag aaa gaa 338
Ala Ala Met Glu Glu Val Glu Ala Thr Val Arg Ala Lys Gln Lys Glu
15 20 25

ttt acg gac aat ata aac aga gct ttt gaa caa ggt gat ttt gaa aaa 386
Phe Thr Asp Asn Ile Asn Arg Ala Phe Glu Gln Gly Asp Phe Glu Lys
30 35 40 45

gcc aag gaa ctt ctt aca aaa atg aga tac ttt tca aac ata gaa gaa 434
Ala Lys Glu Leu Leu Thr Lys Met Arg Tyr Phe Ser Asn Ile Glu Glu
50 55 60

aag atc aag tta agc aag aac cct ctc tag ttgctaactt aaaggtttta 484
Lys Ile Lys Leu Ser Lys Asn Pro Leu *

aaataaaactt tgtattttctt cannnnnnnan nnnnnannntn nnnnagcggc cgcc

538

<210> 55

<211> 805

<212> DNA

<213> Rattus norvegicus

<400> 55

tctagcgaac	cccttcgcga	aggggttcgc	ttcttacct	gtggagaaag	gggcaggagg	60
aacctcctgt	gttaggagga	agctggagct	taccactgtg	agaggacaga	tgtggactga	120
gaattttctt	agtgtcagt	ggcacttccc	aaggactccc	ctccccttgt	gctctgtgcg	180
gttttttagga	cagctaagat	gactgccacc	tgttgtggca	ggcccgat	gtcttgttct	240
ccccttactg	taccccgata	taatctctgt	tgatcaacag	gactacccca	agaatccaca	300
tgttctcccc	cgtaaccagg	cagctgtctg	gttcatgcct	tcttcccttc	aaacccaacc	360
cagcgcctt	gttagtgaag	aggtggtcca	tggactgatg	acaagttatt	agcactggat	420
gctgtttcca	tagtgacaag	cctatacctc	ttcccacct	ttagtgcgca	gtgggctgct	480
gcttcagtat	cctcccagct	cagttttatt	agatcaaagc	tgcccttggg	caccatgttg	540
gccacctcaa	tcaccagcca	aaatggtcgc	tttgtccacc	agaggtcaag	ccatctttct	600
ggcgtgttag	ttcccagctc	cttctaggga	acaggaagtt	gatattgcca	tgggggaggt	660
ggcggggtgt	ggcgtcacc	tcaatagttt	tactgtaaaa	gggaaatttg	aacaagaaca	720
acaacaaaaa	aaaaaaaaaa	acaaagaaaa	aaataaaaaa	ctttaaaaagt	tgaaaaaaaa	780
aaaaaaaaaa	aaaaaaagcg	gccgc				805

<210> 56

<211> 1407

<212> DNA

<213> Rattus norvegicus

<220>

<221> misc_feature

<222> (1)...(1407)

<223> n = A,T,C or G

<221> CDS

<222> (90)...(431)

<400> 56

totagcgaac	cccttcgctg	ggacccgcaa	ctaccaactg	ccgcctggat	cctaggtgag	60
ctgtgggctc	tgacagcgct	gtggctaac	atg gca ccc	aaa aag aag act ctc		113
			Met Ala Pro	Lys Lys Lys Thr Leu		
			1	5		
aag aag aac	aaa ccc gag	atc aat gag	atg acc atc	atc atc gtg	gaa gac	161
Lys Lys Asn	Lys Pro Glu	Ile Asn Glu	Met Thr Ile	Ile Val Glu	Asp	
10	15	20				
agc ccc cta	aac aag ctg	aat gct cta	aat ggg ctc	ctg ggg gga	gaa	209
Ser Pro Leu	Asn Lys Leu	Asn Ala Leu	Asn Gly Leu	Leu Gly Gly	Glu	
25	30	35	40			
aac agc ctt	agc tgt gtt	tct ttc gaa	cta aca gac	act tct tat	ggg	257
Asn Ser Leu	Ser Cys Val	Ser Phe Glu	Leu Thr Asp	Thr Ser Tyr	Gly	
45	50	55				
ccc aac ctc	ctg gaa ggt	tta agt aaa	atg cgt caa	gag agc ttt	cta	305

Pro Asn Leu Leu Glu Gly Leu Ser Lys Met Arg Gln Glu Ser Phe Leu
60 65 70

tgt gac ttg gtc atc ggt cca aaa cca agt cct ttg atg tcc ata agt 353
Cys Asp Leu Val Ile Gly Pro Lys Pro Ser Pro Leu Met Ser Ile Ser
75 80 85

caa gtg atg gct tcc tgc agc gag tct tct ata ata tcc tta aaa cga 401
Gln Val Met Ala Ser Cys Ser Glu Ser Ser Ile Ile Ser Leu Lys Arg
90 95 100

tcc atc gac aaa aag ggt aga cct caa tga tctgncct ttagggctac 451
Ser Ile Asp Lys Lys Gly Arg Pro Gln *
105 110

caccgtgata gcatatgcat acacnggaaa gctgcccctt ctttatacac aataaggaag 511
catcatttct gctgctgtgt acctccagat ccacactctt gtgaagatgt gcagcgactt 571
tctgatccga gagatcagtg ttgagaactg catgtatggt gttaacatgg ctgaaacata 631
ctgcttgaaa aatgcgaaag caacggccca gaaatttatc cgggataact tcattgaatt 691
tgccgactcc gaacaattta tgaagctgac gtttgaacag attaatgagc ttctcataga 751
tgatgacttg cagttgcctt ctgagctggt agcattccag attgcaatga aatggataga 811
attcaaccaa aagagagtga agcacgctgc ggatctttta agcaatattc gctttggtac 871
catctctgca caagacctgg tcaattacgt tcaaaccgta ccgagaatga tgcaagacgc 931
tgattgtcat aaactgcttg tggatgctat gaactaccac ttactacctt atcatcaaaa 991
cacgttgcaa tctaggcgga caagaattag aggcggctgc cgggttctga tcaactgtcg 1051
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aatggatgga gcaagcttac agaaatgcca gccaaagagt tcaatcagtg tgtggctgtg 1171
atggatggat tcttttatgt agcaggtggt gaggaccaga atgatgcgag aaaccaagcc 1231
aagcatgcag tcagcaattt ctgcaggtac cgatccccgc ttcaacacgt ggatccacct 1291
gggcagcatg aaccagaagc gcacgcactt cagcctgagc gtgttcaacg ggctcctgta 1351
cgccggtggn gggcnccagt gnganggata tctgcagaat tcggctagcc gaattc 1407

<210> 57
<211> 2004
<212> DNA
<213> Rattus norvegicus

<220>
<221> misc_feature
<222> (1)...(2004)
<223> n = A,T,C or G

<221> CDS
<222> (88)...(432)

<400> 57
tctagcgaac cccttcggac actgccagca tagacagcag ccctgctac tgtcccacca 60
ctgtacccca gagccccgac tagcagt atg ccg gga gcg cca ggg cct ggg cct 114
Met Pro Gly Ala Pro Gly Pro Gly Pro
1 5

gag gtg gct gca gcc ttt gag gaa cgg ttg agt cag gca cta cag gaa 162
Glu Val Ala Ala Ala Phe Glu Glu Arg Leu Ser Gln Ala Leu Gln Glu
10 15 20 25

ctg cag gca gtg gct gaa gca ggc cgg tca gcg gtg acc cag gca gct 210
Leu Gln Ala Val Ala Glu Ala Gly Arg Ser Ala Val Thr Gln Ala Ala

	30	35	40	
gat gca gcc cta gcc act gta gag cca gtg get cag gca tct gaa gag				258
Asp Ala Ala Leu Ala Thr Val Glu Pro Val Ala Gln Ala Ser Glu Glu				
	45	50	55	
ctt cgg gcc gag aca gca gcc ctg agc cgg cgg ctg gat gcc ctg acc				306
Leu Arg Ala Glu Thr Ala Ala Leu Ser Arg Arg Leu Asp Ala Leu Thr				
	60	65	70	
agg cag gtg gag gtg ctg agc cta cgg ctg ggt gtt cca ctc gtg ccg				354
Arg Gln Val Glu Val Leu Ser Leu Arg Leu Gly Val Pro Leu Val Pro				
	75	80	85	
gac ctg gag tcc gag cta gag ccc agc gag ctg ttg ctg gct gct gcc				402
Asp Leu Glu Ser Glu Leu Glu Pro Ser Glu Leu Leu Leu Ala Ala Ala				
	90	95	100	105
gac cct gag gcc ctc ttc cag gca agc tga ggatgctggg acccccgtgg				452
Asp Pro Glu Ala Leu Phe Gln Ala Ser *				
	110			

ccacccgcct	gccttttagca	cccgccgcag	ctctttctgcg	ggccccctctc	gaagcagcag	512
tctcatggag	ccgatccag	cagagccccc	ctctgccaca	gtggaagcag	ctaattggaac	572
agagcagact	ctggacaaag	tgaacaaagg	cccagagggg	cggagccccc	tgagtgcaga	632
ggagctgatg	gccattgagg	acgaaggaat	cctggacaag	atgctggacc	aggctacgaa	692
ctttgaagag	cggaaagctca	tccgggctgc	gctccgtgag	ctccgacaaa	gaaagagaga	752
ccagagggac	aaggaacgag	aacggcggct	acgagaggca	cgggcccggc	caggcgagag	812
ccgaagcaat	atggctacta	cagagaccac	caccaggcac	aagccagagg	gcggtgatg	872
gctcggcggt	cagcacagtt	accaaaactg	agcgggtcgt	ccactccaat	gacggcacgc	932
agactgcgcg	caccaccaca	gtggagtcca	gtttcgtgag	gcgctcggag	aatggcagca	992
gcaagcaagc	agcagcacca	cggtcctaac	caagaccttt	tcctcttcct	cttcctcatc	1052
caaaaaaatg	ggcagtatct	tgcaccgaga	ggaccaaac	agctcacgtt	ctggcagcct	1112
ggcgccctc	gaaaaacgcc	aggcagagaa	gaagaaagag	ctcatgaagg	cacagagtct	1172
gcccagacc	taagcgtccc	aagcacgcaa	ggccatgatt	gagaaactag	agaaggaagg	1232
ctcttogggc	agtccctggc	caccccgtag	agcggtagag	cgttctacca	gcttcggagt	1292
ccccaacgcc	aacagcatca	agcagatgtt	gctggactgg	tgccgagcca	agaccogtgg	1352
ctacgagcac	gtggacatcc	agaacttctc	tccagctgga	gtgatgggat	ggctttctgt	1412
gccttggtgc	acaatttctt	ccctgaggct	tttgactatg	gacagcttag	cccacaaaac	1472
cggcgccaga	actttgaaat	ggccttctca	tctgctgaga	cccatgcgga	ctgcccgcag	1532
ctcctggata	cagaggacat	ggtgcggctt	cgagagcctg	actggaagtg	cgtgtacacg	1592
tacatccagg	agttctaccg	ctgtctggtc	cagaaggggc	tggtaaaaac	caaaaagtcc	1652
taacccctgc	ttggggcccc	acggatgctg	gtggactgtg	tacccttggt	ggaggtggag	1712
gacatgatga	tcatgggcaa	aaagccagac	cctaagtgcg	tcttcacctc	cgtgcaatcg	1772
ctgtacaacc	acctgcggcg	ccatgagctg	cgctgcgcg	gcaagaatgt	ctagccactg	1832
ctcacaccgc	ctgcgctgca	ggctgctgtc	ccacgcccc	aacaccggnc	cctncagtgn	1892
gcctgccact	gntgcccgtg	tgtcgaaaca	cctntcccct	tgtcacacgc	agnngnttga	1952
taaattatatt	gntttnaaca	aaaaaaaaaa	aaaaaaaaaa	aaaagcggcc	gc	2004

<210> 58
 <211> 881
 <212> DNA
 <213> Rattus norvegicus

<220>
 <221> CDS
 <222> (84)...(377)

<400> 58

tctagcgaac cccttcgctc cagggcggtt gcctcctgct gacttgctct tcaccattag 60
acaagcctga cgtcaagacc cca atg gct aac gaa gct aac cct tgc cca tgt 113
Met Ala Asn Glu Ala Asn Pro Cys Pro Cys
1 5 10

gac att ggt cac agg cta gac tat ggt ggc atg ggc cag gaa gtt cag 161
Asp Ile Gly His Arg Leu Asp Tyr Gly Gly Met Gly Gln Glu Val Gln
15 20 25

gtt gag cac atc aag gca tat gtc acc cgg tcc cct gtg gat gca ggc 209
Val Glu His Ile Lys Ala Tyr Val Thr Arg Ser Pro Val Asp Ala Gly
30 35 40

aaa gct gtg att gtt gtc cag gat ata ttt ggc tgg cag ctg tcc aac 257
Lys Ala Val Ile Val Val Gln Asp Ile Phe Gly Trp Gln Leu Ser Asn
45 50 55

acc agg tat atg gct gac atg att gct gga aat gga tac aca act att 305
Thr Arg Tyr Met Ala Asp Met Ile Ala Gly Asn Gly Tyr Thr Thr Ile
60 65 70

gcc cag act tct ttg tgg gtc aag agc cat ggg acc cgg ctg gtg att 353
Ala Gln Thr Ser Leu Trp Val Lys Ser His Gly Thr Arg Leu Val Ile
75 80 85 90

ggg cca cct tcc ctg agt ggt tga aatcaagaaa tgccagaaaa atcaaccgag 407
Gly Pro Pro Ser Leu Ser Gly *
95

aggttgatgc tgtcttgagg tatctgaaac aacagtgtca tgcccagaag attggcattg 467
tgggcttctg ctgggggggt attgtggtgc accacgtgat gacgacatat ccagaagtca 527
gagcgggggt gtctgtctat ggtatcatca gagattctga agatgtttat aatttgaaga 587
acccaacgtt gtttatcttt gcagaaaatg atgctgtgat tccacttgag caggtttcta 647
tactgatcca gaagcttaaa gaacactgca tagttaatta ccaagttaag acattttctg 707
ggcaaaactca tggctttgtg catcggaaga gagaagactg ctcccctgca gacaaaccct 767
acattgagga agcaggagg aatctcatcg aatggctgaa caagtatatt taacagcact 827
caagcacaata ttttgaataa ttaaattgac ccgaataatt aaattgaccc gaat 881

<210> 59

<211> 97

<212> PRT

<213> Rattus norvegicus

<400> 59

Met Ala Asn Glu Ala Asn Pro Cys Pro Cys Asp Ile Gly His Arg Leu
1 5 10 15
Asp Tyr Gly Gly Met Gly Gln Glu Val Gln Val Glu His Ile Lys Ala
20 25 30
Tyr Val Thr Arg Ser Pro Val Asp Ala Gly Lys Ala Val Ile Val Val
35 40 45
Gln Asp Ile Phe Gly Trp Gln Leu Ser Asn Thr Arg Tyr Met Ala Asp
50 55 60
Met Ile Ala Gly Asn Gly Tyr Thr Thr Ile Ala Gln Thr Ser Leu Trp
65 70 75 80
Val Lys Ser His Gly Thr Arg Leu Val Ile Gly Pro Pro Ser Leu Ser

Gly

<210> 60
 <211> 245
 <212> PRT
 <213> Rattus norvegicus

<400> 60

Met	Lys	Pro	Glu	Asn	Cys	Phe	Thr	Ile	Thr	Ser	Ser	Phe	Trp	Pro	Ser
1				5					10					15	
Leu	Arg	Pro	Trp	Lys	Ile	Val	Cys	Gly	Asp	Ser	Tyr	Arg	Lys	Gln	Thr
			20					25					30		
Gly	Arg	Leu	Lys	Gln	Thr	Arg	Ser	Lys	Val	Arg	Cys	Arg	Cys	His	Gly
		35					40				45				
Gln	Thr	Leu	Gly	Glu	Ala	Trp	Ala	Thr	Leu	Val	Phe	Met	Leu	Glu	Arg
		50				55					60				
Arg	Arg	Glu	Leu	Leu	Gly	Leu	Thr	Ser	Glu	Phe	Phe	Gln	Ser	Ala	Leu
65					70					75					80
Glu	Phe	Ala	Ile	Lys	Ile	Asp	Gln	Ala	Glu	Asp	Phe	Leu	Gln	Asn	Pro
				85					90					95	
His	Glu	Phe	Glu	Ser	Ala	Glu	Ala	Leu	Gln	Ser	Leu	Leu	Leu	Leu	His
			100					105					110		
Asp	Arg	His	Ala	Lys	Glu	Leu	Leu	Glu	Arg	Ser	Leu	Val	Leu	Leu	Asn
		115					120					125			
Lys	Ser	Gln	Gln	Leu	Thr	Asp	Phe	Ile	Glu	Lys	Phe	Lys	Cys	Asp	Gly
		130				135					140				
Ser	Pro	Val	Asn	Ser	Glu	Leu	Ile	Gln	Gly	Ala	Gln	Ser	Ser	Cys	Leu
145					150					155					160
Lys	Ile	Asp	Ser	Leu	Leu	Glu	Leu	Leu	Gln	Asp	Arg	Arg	Arg	Gln	Leu
				165					170					175	
Asp	Lys	His	Leu	Gln	Gln	Gln	Arg	Gln	Glu	Leu	Ser	Gln	Val	Leu	Gln
			180					185					190		
Leu	Cys	Leu	Trp	Asp	Gln	Gln	Glu	Ser	Gln	Val	Ser	Cys	Trp	Phe	Gln
		195					200					205			
Lys	Thr	Ile	Arg	Asp	Leu	Gln	Glu	Gln	Ser	Leu	Gly	Ser	Ser	Leu	Ser
		210				215					220				
Asp	Asn	Lys	Glu	Leu	Ile	Arg	Lys	His	Glu	Asp	Leu	Pro	Ser	Lys	Gln
225					230					235					240
Arg	Val	Pro	Ala	Val											
				245											

<210> 65
 <211> 142
 <212> PRT
 <213> Rattus norvegicus

<220>

<221> VARIANT

<222> (1)...(142)

<223> Xaa = Any Amino Acid

<400> 65

Met	Thr	Glu	Ser	Val	Val	Cys	Thr	Gly	Ala	Val	Ser	Thr	Val	Lys	Glu
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Val	Trp	Glu	Glu	Arg	Ile	Lys	Lys	His	His	Glu	Asp	Val	Lys	Arg	Glu

	20		25		30										
Lys	Glu	Phe	Gln	Gln	Lys	Leu	Val	Arg	Ile	Trp	Glu	Asp	Arg	Val	Ser
	35					40					45				
Leu	Thr	Lys	Leu	Lys	Glu	Lys	Val	Thr	Arg	Glu	Asp	Gly	Arg	Ile	Ile
	50					55					60				
Leu	Arg	Ile	Glu	Lys	Glu	Glu	Trp	Lys	Thr	Leu	Pro	Ser	Ser	Leu	Leu
	65				70					75				80	
Lys	Leu	Asn	Gln	Leu	Gln	Glu	Trp	Gln	Leu	His	Arg	Thr	Gly	Leu	Leu
			85					90					95		
Lys	Ile	Pro	Glu	Phe	Ile	Gly	Arg	Phe	Gln	His	Leu	Ile	Gly	Leu	Asp
			100					105					110		
Leu	Ser	Arg	Asn	Thr	Ile	Ser	Glu	Ile	Pro	Pro	Arg	His	Trp	Thr	Xaa
		115					120					125			
His	Leu	Asp	Phe	Lys	Glu	Leu	Ile	Leu	Ser	Tyr	Thr	Lys	Ser		
	130					135					140				

<210> 69
 <211> 49
 <212> PRT
 <213> Rattus norvegicus

<400> 69
 Met Ser Ser Ser His Leu Arg Thr Arg Ser Ala Arg Thr Pro Gly Lys
 1 5 10 15
 Ile Pro Leu Ile Pro Ile Val Gly Asn Met Leu Pro Ala Val Gly His
 20 25 30
 Leu Ile Tyr Thr Phe Ser Gly Leu Thr His Tyr Pro Lys Asn Leu Leu
 35 40 45
 Thr

<210> 71
 <211> 70
 <212> PRT
 <213> Rattus norvegicus

<400> 71
 Met Glu Ile Asn Glu Lys Leu Ala Asp Ala Lys Ser Glu Ala Ala Met
 1 5 10 15
 Glu Glu Val Glu Ala Thr Val Arg Ala Lys Gln Lys Glu Phe Thr Asp
 20 25 30
 Asn Ile Asn Arg Ala Phe Glu Gln Gly Asp Phe Glu Lys Ala Lys Glu
 35 40 45
 Leu Leu Thr Lys Met Arg Tyr Phe Ser Asn Ile Glu Glu Lys Ile Lys
 50 55 60
 Leu Ser Lys Asn Pro Leu
 65 70

<210> 74
 <211> 113
 <212> PRT
 <213> Rattus norvegicus

<400> 74
 Met Ala Pro Lys Lys Lys Thr Leu Lys Lys Asn Lys Pro Glu Ile Asn
 1 5 10 15
 Glu Met Thr Ile Ile Val Glu Asp Ser Pro Leu Asn Lys Leu Asn Ala

		20						25					30				
Leu	Asn	Gly	Leu	Leu	Gly	Gly	Glu	Asn	Ser	Leu	Ser	Cys	Val	Ser	Phe		
		35					40					45					
Glu	Leu	Thr	Asp	Thr	Ser	Tyr	Gly	Pro	Asn	Leu	Leu	Glu	Gly	Leu	Ser		
	50					55					60						
Lys	Met	Arg	Gln	Glu	Ser	Phe	Leu	Cys	Asp	Leu	Val	Ile	Gly	Pro	Lys		
65					70				75						80		
Pro	Ser	Pro	Leu	Met	Ser	Ile	Ser	Gln	Val	Met	Ala	Ser	Cys	Ser	Glu		
				85					90					95			
Ser	Ser	Ile	Ile	Ser	Leu	Lys	Arg	Ser	Ile	Asp	Lys	Lys	Gly	Arg	Pro		
		100						105					110				

Gln

<210> 76
 <211> 114
 <212> PRT
 <213> Rattus norvegicus

Met	Pro	Gly	Ala	Pro	Gly	Pro	Gly	Pro	Glu	Val	Ala	Ala	Ala	Phe	Glu		
1			5					10						15			
Glu	Arg	Leu	Ser	Gln	Ala	Leu	Gln	Glu	Leu	Gln	Ala	Val	Ala	Glu	Ala		
		20					25					30					
Gly	Arg	Ser	Ala	Val	Thr	Gln	Ala	Ala	Asp	Ala	Ala	Leu	Ala	Thr	Val		
	35					40					45						
Glu	Pro	Val	Ala	Gln	Ala	Ser	Glu	Glu	Leu	Arg	Ala	Glu	Thr	Ala	Ala		
	50				55				60								
Leu	Ser	Arg	Arg	Leu	Asp	Ala	Leu	Thr	Arg	Gln	Val	Glu	Val	Leu	Ser		
65				70					75						80		
Leu	Arg	Leu	Gly	Val	Pro	Leu	Val	Pro	Asp	Leu	Glu	Ser	Glu	Leu	Glu		
			85				90						95				
Pro	Ser	Glu	Leu	Leu	Leu	Ala	Ala	Ala	Asp	Pro	Glu	Ala	Leu	Phe	Gln		
		100					105						110				

Ala Ser

<210> 77
 <211> 25
 <212> DNA
 <213> Artificial Sequence

<220>
 <223> Primer specific for vector to produce "Driver DNA".

<400> 77
 cgtatgttgt gtggaattgt gagcg

<210> 78
 <211> 25
 <212> DNA
 <213> Artificial Sequence

<220>
 <223> Primer specific for vector to produce "Driver DNA".

<400> 78
gatgtgctgc aaggcgatta agttg 25

<210> 79
<211> 28
<212> DNA
<213> Artificial Sequence

<220>
<223> Oligos corresponding to polylinker sequence.

<400> 79
gccgccagtg tgctggaatt cggctagc 28

<210> 80
<211> 28
<212> DNA
<213> Artificial Sequence

<220>
<223> Oligos corresponding to polylinker sequence.

<400> 80
cgaattctgc agatatccat cacactgg 28

<210> 81
<211> 25
<212> DNA
<213> Artificial Sequence

<220>
<223> Oligos corresponding to polylinker sequence.

<400> 81
ctagagggcc caattcgccc tatag 25

<210> 82
<211> 25
<212> DNA
<213> Artificial Sequence

<220>
<223> Oligos corresponding to polylinker sequence.

<400> 82
tgagtcgtat tacaattcac tggcc 25

<210> 83
<211> 20
<212> DNA
<213> Artificial Sequence

<220>
<223> Oligos corresponding to polylinker sequence.

<400> 83

20

<211> 18

<213> Art:

<213> Artificial Sequence

 $\langle 220 \rangle$

<223> Oligos corresponding to polylinker sequence.

<400> 84

ttttttttttttt tttttttttt

18

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